POPULAR PHOTOGRAPHY

EXCLUSIVE: FULL LAB TEST
CANON G1 X
POWERFUL POCKET CAM P.77

HOW TO MAKE GREAT PICTURES

WHAT'S NEXT IN TECH

Today's Trends in Cameras & Lenses Point the Way P.62

- Higher Resolution
- Swift, Silent Zooms
- Wireless Networking

JUST OUT
OLYMPUS
OM-D
E-M5

PLUS: 12 Handy Tricks You Didn't Know Your DSLR Could Do Now P.66

Get the Peak Action P.34
Dancers in Motion P.39
Find Perfect Light P.48
Appalachian Spring P.56
Best Portrait Tips P.70

APRIL 2012
US $4.99

© Michael Nichols

YOU LEARN TO SPEAK WITHOUT WORDS.

PUT YOURSELF IN ARM'S REACH.

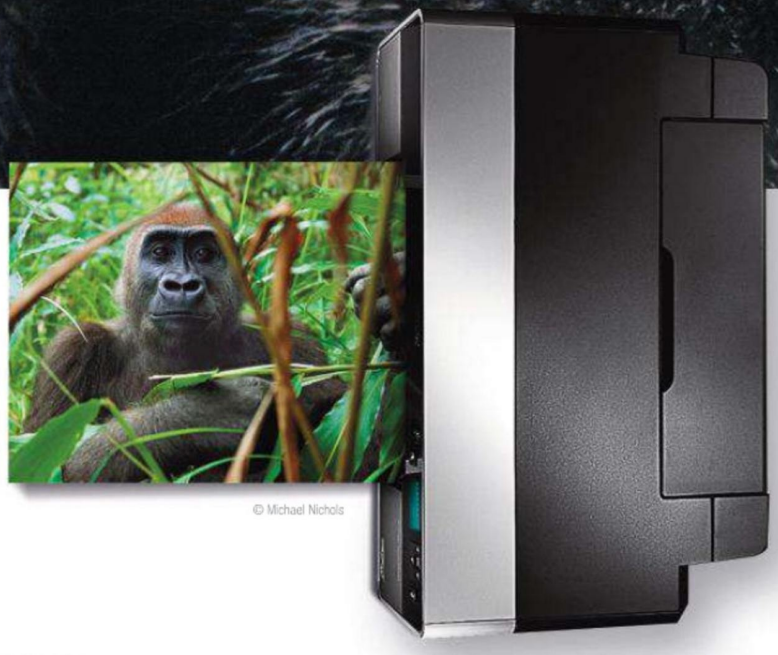
PICK YOUR CAMERA UP. PUT IT DOWN.

WIPE THE TEARS AWAY.

PICK YOUR CAMERA BACK UP AGAIN.

JUST TO GET ONE SHOT.

FINISH STRONG.



© Michael Nichols

NEW Epson Stylus® Photo R3000 – $849.99*

*Prices are Manufacturer Suggested Retail Price. Epson, Epson Stylus, Epson UltraChrome K3 and MicroPiezo are registered trademarks and Epson Exceed Your Vision is a registered logomark of Seiko Epson Corporation. All other product and brand names are trademarks and/or registered trademarks of their respective companies. Epson disclaims any and all rights in these marks. Copyright 2011 Epson America, Inc.

- *Exhibition-quality prints from 13" to 17" wide*
- *Epson UltraChrome K3® with Vivid Magenta, used by the world's leading photographers for stunning black-and-white and brilliant reds, blues and purples*
- *MicroPiezo® print head technology for exceptionally precise ink droplet placement*
- *World-class service from a dedicated support team*

EPSON®
EXCEED YOUR VISION

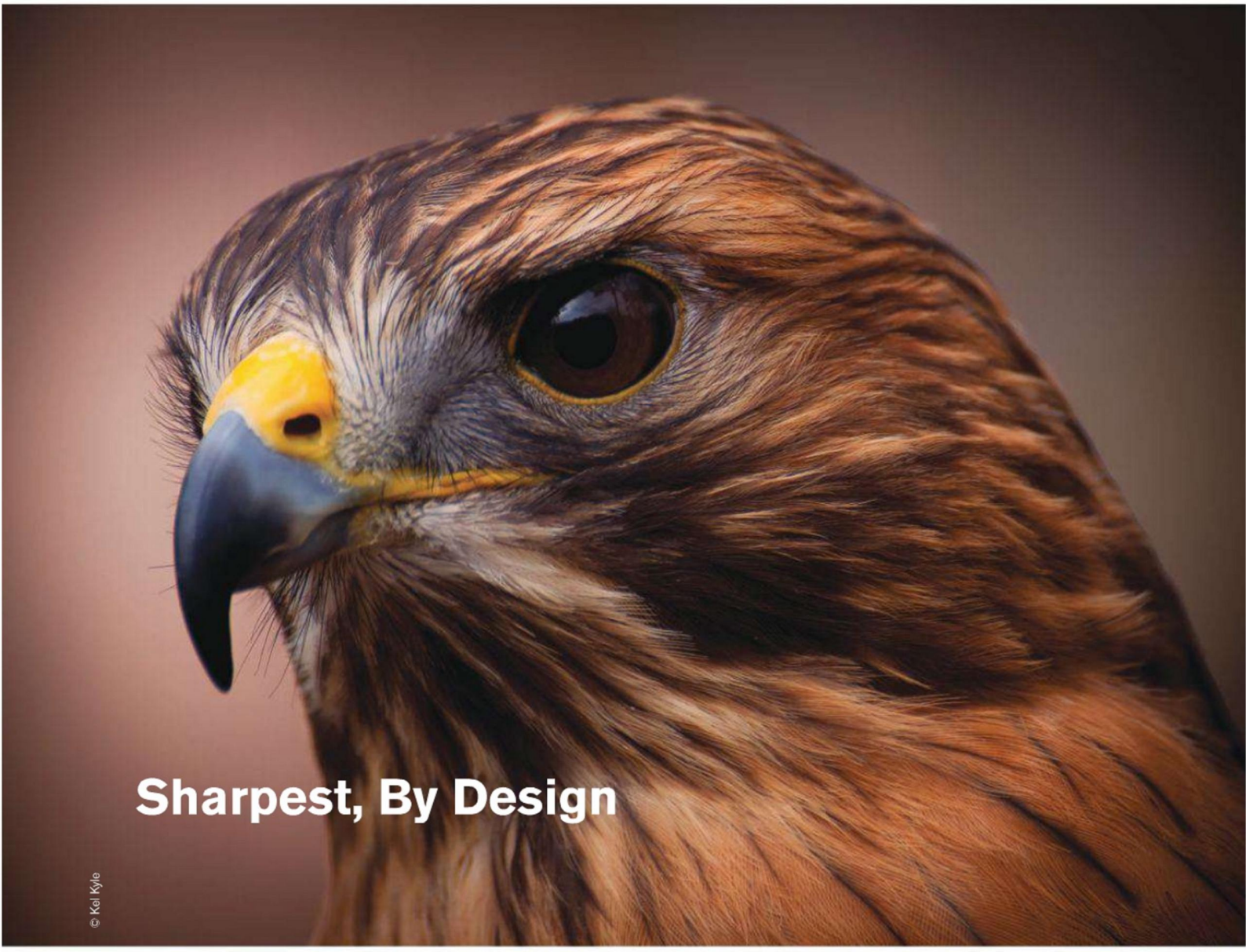
Epson Stylus Pro 3880SW – $1,495*

Epson Stylus Photo R2880 – $599.99*

EPSON ULTRACHROME K3 INK
VIVID MAGENTA

EPSON.COM/**FINISHSTRONG**

WorldMags.net



SP 70–300mm F/4–5.6 Di VC USD

Tamron's SP 70-300mm Di VC USD delivers class-leading sharpness, brilliant color and striking contrast and features Tamron's fast and quiet USD (Ultrasonic Silent Drive) auto-focus drive and VC (Vibration Compensation) image stabilization. Winner of the prestigious EISA Award 2010-2011: Best Zoom Lens.

The Sony mount does not include VC as the body of Sony DSLRs includes image stabilization functionality. Therefore, the Sony mount lens is called SP 70–300mm F/4–5.6 Di USD and does not include the VC description.

$50 mail-in rebate, see website for details.

www.tamron-usa.com

TAMRON
New eyes for industry

WorldMags.net

CONTENTS

HOW TO MAKE GREAT PICTURES APRIL 2012 VOLUME 76, NO. 4

Please Recycle This Magazine

FEATURES

62 TECH TRENDS
What's next? Smarter cameras and lenses that take higher-res images, while wirelessly connecting with every device you own. *By Philip Ryan*

66 HIDDEN TALENTS
A dozen little-known DSLR features that can make your life easier—right now.
By Dan Richards

56 APPALACHIAN SPRING Let one of America's most scenic highways lead you to great landscape, wildlife, and floral photography: Explore the Blue Ridge Parkway, along with the Shenandoah and Great Smoky Mountains National Parks. *By Ian Plant*

70 PLANNING PORTRAITS
Five portrait specialists talk about the photographic strategies and techniques they employed to succeed with specific subjects and shooting conditions. Put their tips and ideas to work for you.
By Peter Kolonia

SATOSHI (LENS); DAN BRACAGLIA (CAMERA BACK); IAN PLANT (WATERFALL); RICHARD BROCKEN (GIRL); LYDIA PANAS (GROUP PORTRAIT)

WorldMags.net

HOYA
HMC
MULTI COATED FILTERS

Multi-coated Lenses Need
Mulit-coated Filters

MONO-COATED NON-COATED

HMC MULTI-COATED

Lens manufactures go to great lengths to multi-coat their lenses to reduce image degrading flare and ghosting caused by light reflecting off the surfaces of the glass elements in the lens. HOYA HMC filters have triple-layer multi-coating to maintain the excellent optical characteristics of the professional lenses they are placed on. Using HOYA HMC filters can protect your lens, maintain image quality and help you get the shots you want.

EXCLUSIVE DISTRIBUTION BY:
THK PHOTO PRODUCTS, INC.
Tokina • HOYA • Kenko • SLIK
7642 Woodwind Drive, Huntington Beach, CA 92647
Visit our website for more information at
www.thkphoto.com

NEXT

11 WE WANT THIS Olympus resurrects its OM line, digitally.

12 JUST OUT A Sony under glass, a haute couture Pentax, and a cute little Lensbaby with adjustable tilt/shift focus.

16 STATE OF THE ART Skinny compacts with big, fat zoom ranges.

18 CLOSER LOOK There's more than megapixels in the Nikon D800.

SHARE

23 PHOTO CHALLENGE Our winner captures a *lot* of night music.

24 MY PROJECT Would New York City be prettier without the New Yorkers?

26 I, PHOTOGRAPHER Downward dogs nudge his income upward.

28 LETTERS You get riled up over crude gestures and sophisticated setups.

31 TECH TALK Deep insights into working with shallow depths of field.

34 YOUR BEST SHOT Three approaches to capturing peak action.

HOW

39 CREATIVE THINKING Set long exposures to draw the lines of a dancer's movement.

40 FIX IT FAST Blow out highlights for a ducky background.

42 TIPS & TRICKS Get closer to fix your pix, and then get lower, too.

44 TRAVELING PHOTOGRAPHER Celebrate a century's worth of cherry blossoms.

48 LIGHTING Harness available light—it's as expressive as (and much less expensive than) store-bought.

50 SOFTWARE WORKSHOP Explore Photoshop Touch for digital tablets on the Android and iOS platforms.

54 YOU CAN DO IT Give Mother Nature's critters the Avedon treatment.

LAB

77 COMPACT TEST Canon GX 1 Looks like a compact; shoots like an ILC.

84 LENS TEST Sigma 18–200mm f/3.5–6.3 II DC OS HSM An all-in-one zoom that's one for all.

88 LENS TEST Rokinon 24mm f/1.4 ED AS UMC Fast, robust, manual.

DON'T MISS...

6 EDITOR'S LETTER
8 SHOWCASE
102 TIME EXPOSURE
116 BACKSTORY

POPULAR PHOTOGRAPHY (ISSN 1542-0337) (USPS 504-890), April 2012, Volume 76, Issue 4, is published monthly by Bonnier Corporation, 2 Park Ave., New York, NY 10016. Periodicals postage paid at New York, NY and additional mailing offices. Authorized periodicals postage by the Post Office Department, Ottawa, Canada, and for payment in cash. POSTMASTER: Send address changes to Popular Photography, P.O. Box 420235, Palm Coast, FL 32142-0235; www.PopPhoto.com/cs. If the postal service alerts us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within one year.
Publications Mail Agreement No. 40052054, Canadian Registration Number 126018209RT0001. Return undeliverable Canadian addresses to: Pitney Bowes, P.O. Box 25542, London, ON N6C 6B2. SUBSCRIPTION SERVICES: Visit www.PopPhoto.com/cs to manage your account 24/7 or call 1-386-246-0407.

NEWSSTAND COVER: SATOSHI (CAMERA); JOHN KNIGHT (POLAR BEAR); BILL WADMAN (DANCERS); CARY NORTON (POOLHALL); IAN PLANT (WATERFALL); RICHARD BROCKEN (FACE).
SUBSCRIBER COVER: PAUL MARCELLINI. THIS PAGE: RANDY SANTOS, DCSTOCKIMAGES.COM (CHERRY BLOSSOMS); SATOSHI (CANON CAMERA).

THE FASTEST, EASIEST PORTRAIT TOUCH-UP SOFTWARE

extra 10% off

Popular Photography readers get an
EXTRA 10% DISCOUNT
off any sale or list price -
use coupon code **PFK738**
when buying online.

Everyone deserves to look their best. Portrait Professional 10 intelligent retouching software enhances any subject's looks in minutes. Portrait Professional does all the hard work for you.

DOWNLOAD YOUR FREE TRIAL NOW!
WWW.PORTRAITPROFESSIONAL.COM

PORTRAITPROFESSIONAL 10

End of an Epoch

My century-old camera is a brick-sized box when closed, and pops open to release the lens and focusing bellows. Four settings (numbered 1 to 4) control the size of the aperture; the diaphragm snaps open and closed with the press of a lever. A tiny cube-shaped viewfinder flips for vertical shots. The back slides out to reveal the film chamber; a winged key winds the take-up spool. An embossed leather handle on top reads, "No. 2A Folding Pocket Brownie," and the brass plate holding the lens indicates the camera was "Made by Eastman Kodak Co., Rochester, NY USA."

This is not a valuable camera—it cost just $3 when it was first released in 1907, and routinely turns up on eBay now for about $70. But it is precious to me for the handwritten note my grandmother left folded up inside: "This Kodak camera was given to me by Grandpop Max on my 17th birthday in 1912 and is still in good operating condition. Film 116 is used. Gram Celia."

Like Grandmom, I have held on to my first camera, also a Kodak Brownie, for more than 40 years. I suspect many of you can say the same. For those of us who grew up in the 20th century, Kodak was synonymous with photography—in both a practical and nostalgic way. Decades of advertising centered on capturing emotions; "the Kodak moment" reinforced the connection between our photos and memories, our cameras and ourselves.

That sense of nostalgia sparked an outpouring of grief a few years ago when the last roll of Kodachrome left the factory. And recently a similar (though more muted) reaction greeted Kodak when it announced its departure from the camera business. With the company in Chapter 11 bankruptcy, news like this hardly comes as a surprise. Consumer cameras, as a product category, face tremendous competitive strains that squeeze profitability. Besides, Kodak stopped actually making its own cameras in 2006; since then, design and production have been outsourced. No word yet on the future of Kodak's film business—but if that disappeared, well, we'd all weep together.

Not only do I feel sad about the decline of a beloved brand and venerable company, but I also lament the investments and jobs lost in Rochester (and elsewhere). The shuttering of Kodak's camera business marks the end of more than 130 years of innovation in photographic technology. From roll film to digital imaging sensors, the company's inventions have shaped the way we shoot. Even today's trends of touchscreen controls and Wi-Fi connectivity (see Phil Ryan's feature story on page 62) started in Kodak cameras. We'll have to look elsewhere for what's next.

Miriam Leuchter

NEWSSTAND The flexible lens controls in the new Olympus OM-D E-M5 exemplify one of the emerging trends in photo technology (page 62). Photo by Satoshi.

SUBSCRIBER Nature shooter Paul Marcellini photographed this Portuguese man-of-war in a portable field studio. Find out how in You Can Do It, page 54.

POPULAR PHOTOGRAPHY

EDITOR MIRIAM LEUCHTER
ART DIRECTOR Jason Beckstead
SENIOR EDITOR Peter Kolonia
SENIOR EDITOR Dan Richards
SENIOR EDITOR Debbie Grossman
TECHNICAL EDITOR Philip Ryan
TECHNOLOGY MANAGER Julia Silber
ASSISTANT EDITOR Matthew Ismael Ruiz
ART/PRODUCTION ASSISTANT Linzee Lichtman
EDITORIAL COORDINATOR Jae Segarra

CONTRIBUTING EDITORS Laurence Chen, Kathleen Davis, Tim Fitzharris, Lori Fredrickson, Ian Plant, Jeff Wignall

WEB EDITORIAL DIRECTOR John Mahoney
POPPHOTO.COM EDITOR Stan Horaczek
ASSISTANT ONLINE EDITOR Dan Bracaglia
IN MEMORIAM Herbert Keppler

BONNIER'S TECHNOLOGY GROUP
SVP, CORPORATE SALES GREGG R. HANO

EDITORIAL DIRECTOR MARK JANNOT
CREATIVE DIRECTOR Sam Syed
ART DIRECTOR Todd Detwiler
PHOTO EDITOR Thomas Payne
MANAGING EDITOR Jill C. Shomer

GROUP PUBLISHER STEVEN B. GRUNE
ASSOCIATE PUBLISHER Anthony M. Ruotolo (212-779-5481)
ASSOCIATE PUBLISHER, MARKETING Michael Gallic
EXECUTIVE ASSISTANT Christopher Graves
FINANCIAL DIRECTOR Tara Bisciello
CONSUMER MARKETING DIRECTOR Diane G. Potter
NORTHEAST ADVERTISING OFFICE
Amanda Alimo, Scott Constantine, David Ginsberg, Caitlyn Welch
PHOTO MANAGER Sara Schiano Flynn
AD ASSISTANT Andrea Licata
MIDWEST MANAGER John Marquardt
AD ASSISTANT Lori Altieri
LOS ANGELES MANAGERS Robert Hoeck, Bob Meth
AD ASSISTANT Kate Gregory
NORTHWEST MANAGER Jay Monaghan
DETROIT MANAGER Edward A. Bartley
AD ASSISTANT Diane Pahl
SOUTHERN MANAGER Jason A. Albaum
CLASSIFIED ADVERTISING SALES Chip Parham, Patrick Notaro
AD ASSISTANT Colleen Nicoisa
TRAVEL MANAGER Jeff Posner
DIGITAL ADVERTISING DIRECTOR Matthew Bondy
GENERAL MANAGER, DIGITAL OPERATIONS Alexis Costa
DIGITAL PROJECT MANAGER Rochelle Rodriguez
DIGITAL PROJECT COORDINATOR Elizabeth Besada
INTEGRATED SALES DEVELOPMENT DIRECTOR Mike Kelly
INTEGRATED SALES DEVELOPMENT MANAGER Lauren Brewer
INTEGRATED SALES DEVELOPMENT PROJECT MANAGER Kat Collins
GROUP DIRECTOR, CREATIVE SERVICES/EVENTS Mike Iadanza
DIRECTOR OF EVENTS Michelle Cast
SPECIAL EVENTS MANAGER Erica Johnson
DIGITAL DAYS MANAGER Benny Migliorino
WORKSHOP MANAGER David Fine
MARKETING ART DIRECTORS Shawn Woznicki, Lindsay Krist
PROMOTIONS MANAGER Eshonda Caraway-Evans
AD COORDINATOR Irene Reyes Coles
PUBLICITY MANAGER Hallie Kapner (halliekapner@gmail.com)
HUMAN RESOURCES MANAGER Kim Putman
PRODUCTION MANAGER Betty Dong
GROUP PRODUCTION DIRECTOR Laurel Kumides

BONNIER

CHAIRMAN Jonas Bonnier
CHIEF EXECUTIVE OFFICER Terry Snow
CHIEF FINANCIAL OFFICER Randall Koubek
SENIOR VICE PRESIDENT, CORPORATE SALES Gregg R. Hano
VICE PRESIDENT, CONSUMER MARKETING Bruce Miller
VICE PRESIDENT, PRODUCTION Lisa Earlywine
VICE PRESIDENT, INFORMATION TECHNOLOGY Shawn Larson
VICE PRESIDENT, CORPORATE COMMUNICATIONS Dean Turcol
BRAND DIRECTOR John Miller
PUBLISHING CONSULTANT Martin S. Walker
GENERAL COUNSEL Jeremy Thompson

FOR CUSTOMER SERVICE AND SUBSCRIPTION QUESTIONS, such as Renewals, Address Changes, Email Preferences, Billing and Account Status, go to: **PopPhoto.com/cs**
You can also call 386-246-0407 or write to Popular Photography, P.O. Box 420235, Palm Coast, FL 32142-0235

WorldMags.net

FOR PERFECTIONISTS,

AND THOSE WITH EVEN MORE EXACTING STANDARDS.

Nikon®
At the heart of the image.

THE NIKON PRO LEGACY CONTINUES. INTRODUCING THE NIKON D4, A D-SLR FOR PHOTOGRAPHERS WHO DEMAND A CAMERA AS PROFESSIONAL AS THEY ARE.

11 Frames Per Second | 16.2 MP FX-Format CMOS Sensor | Full 1080P HD Video with FX, DX and 2.7 Crop Mode
ISO Range of 100–12,800 Expandable up to 204,800 | Advanced Scene Recognition System with 91,000 Pixel RGB Sensor

nikonusa.com/D4

Nikon® and D4™ are registered trademarks of Nikon Corporation. ©2012 Nikon Inc.

65 million NIKKOR

FOREST OF FINE DETAIL

Assistant Web Editor Dan Bracaglia had just hiked to the top of a ridge at the New Jersey Audubon Society's Scherman Hoffman Wildlife Sanctuary in Bernardsville, NJ, when he noticed the sunlight slicing through the thick tree cover. With a Sigma 18–200mm f/3.5–6.3 II DC OS lens mounted on his Nikon D300, he zoomed out to a moderate focal length of 55mm, capturing the scene at 1/320 sec, f/5.6, and ISO 640. For our full test of this updated all-in-one zoom, **see page 84.**

DAN BRACAGLIA

Do your images reflect your vision?

Now they can...with HDR processing!

Create the look you want with High Dynamic Range processing in Photomatix

If you have ever photographed a high-contrast scene, you know that even the best exposure will typically have blown out highlights and flat shadows. The solution to this problem is High Dynamic Range (HDR) processing. Take three or more photos at varying exposure levels and load them into Photomatix software for merging into HDR. The resulting image reveals highlight and shadow details and you may further adjust it to your liking. Various settings and one-click presets let you get the look you want, from natural-looking to painterly, surreal or ultra-realistic effects. **Make every image capture your vision with Photomatix.**

Cove Point Lighthouse photo © Ferrell McCollough

Available for Windows and Mac OS X

WorldMags.net

www.hdrsoft.com

NEXT

THE HOTTEST NEW STUFF AND THE TECHNOLOGY TRENDS BEHIND IT

SONY'S SLEEK AND SKINNY NEW COMPACT 12

SLIM CAMERAS WITH MAJOR ZOOM REACH 16

CLOSER LOOK: NIKON'S NEW D800 DSLR 18

WE WANT THIS

COMEBACK OM

Retro body and sweet technology in a new Micro Four Thirds

THE NAME may sound familiar: The iconic Olympus OM series of film SLRs first rolled off the line about 40 years ago. Now the OM is back with the 16.1MP OM-D E-M5, the first in Oly's new OM-D series of SLR-style interchangeable-lens compacts.

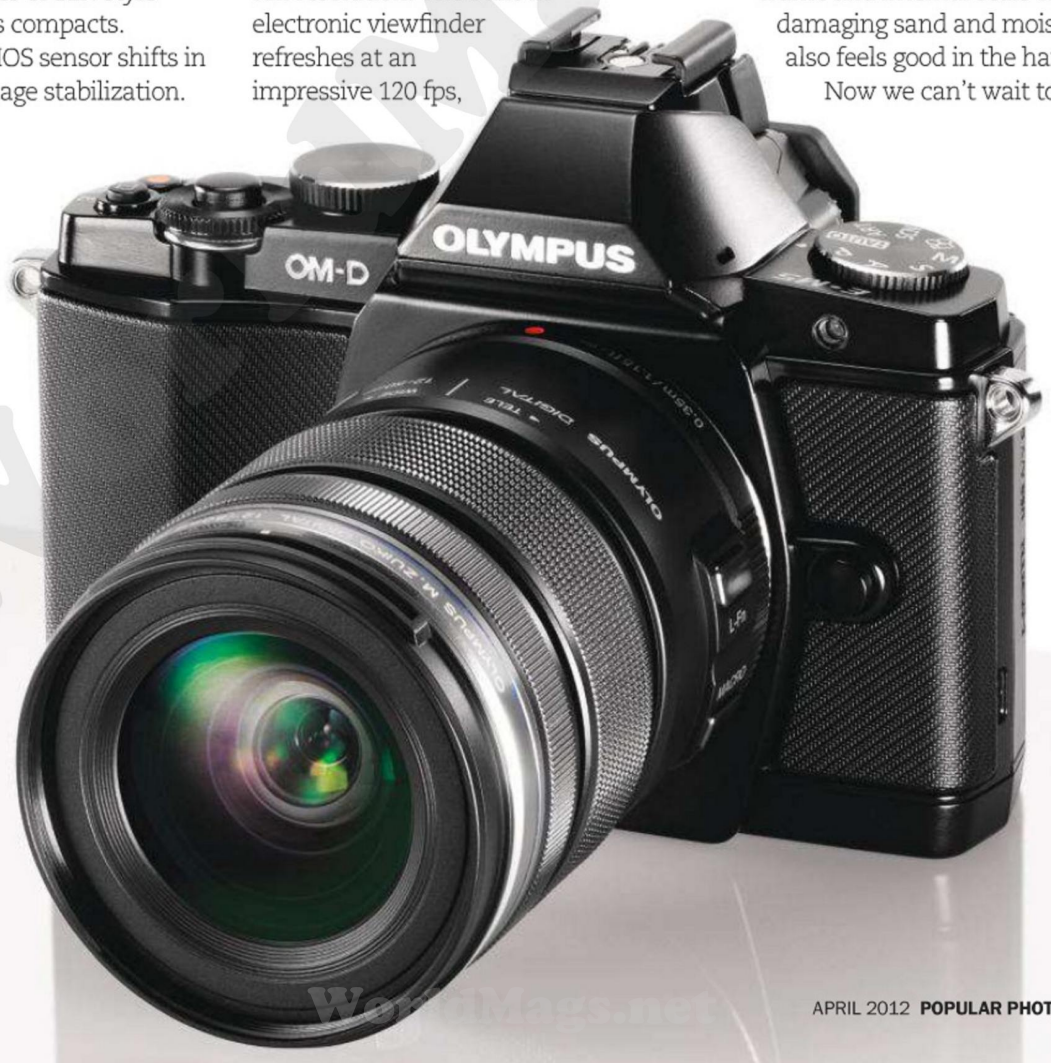
Internally, a LiveMOS sensor shifts in five directions for image stabilization. Olympus claims its new AF system—an amped-up version of the one in the PEN E-P3—is the "world's fastest." In single-shot AF mode, the E-M5 can capture up to 9 frames per second in full resolution. The built-in electronic viewfinder refreshes at an impressive 120 fps, so we hope to find it very responsive.

Like the old-school SLR it resembles, the E-M5 has no built-in flash. Instead, a hot-shoe flash is included. The body is tough, with a magnesium-alloy frame and internal seals to keep out damaging sand and moisture. It also feels good in the hand.

Now we can't wait to test it.

OLYMPUS OM-D E-M5

16.1MP LiveMOS Four Thirds sensor
5-axis IS
Black or silver
$999, body only, street
$1,299 with M.Zuiko Digital ED 12–50mm f/3.5–6.3 EZ lens and flash
olympus america.com



SATOSHI

SLICK SHOT

Waterproof doesn't have to mean rugged

The 18.2MP Cyber-shot TX200V has a built-in compass and also includes a favorite Sony goodie, Sweep Panorama, for creating both 2D and 3D panos.

GLASS ISN'T just for lenses—Sony used it for the front cover plate of its new Cyber-shot DSC-TX200V compact. The reinforced, polished glass contributes to the camera's dust- and waterproofing (down to 16 feet). Unlike other models in the TX series, though, this one is understandably not shockproof.

At 18.2MP, this is Sony's highest-megapixel compact; it captures video at 1920x1080p60. Sony claims high-speed throughput on the sensor provides "DSLR-like" autofocusing speed, and the camera can shoot at up to 10 fps at its highest resolution.

Besides a battery of goof-proofing aids for portraits (face detection, Smile Shutter, anti-blink function, Soft Skin mode), the TX200V also offers background defocus. The Optical Steady Shot's Active Mode counteracts camera movement during video capture, and the built-in GPS and compass can record both the location and orientation of the camera.

Sony Cyber-shot DSC-TX200V
$500, street
www.sonystyle.com

ON THE EDGE

An innovative Lensbaby has some new characteristics

LENSBABY FANS are used to being able to select a circular area of distinct focus when shooting with the company's specialty optics. But the shape of sharpness is changing with the Edge 80, an 80mm flat-field optic compatible with Lensbaby's Composer Pro, Composer, Muse, Scout, and Control Freak systems. Instead of a spot, the Edge 80 creates a band of sharp focus across the image—similar to what you'd get with the tilt function of a tilt/shift lens.

The Edge 80 is also one of the overall sharpest optics Lensbaby makes. It sports a 12-blade diaphragm that yields exceptionally smooth *bokeh* and ranges from f/2.8 through f/22. When the lens is centered, it behaves as a regular lens would.

Lensbaby Edge 80 optic
$300, street
lensbaby.com

PHILIP RYAN (LCD IMAGE)

NEWS FEED

> Ilford has begun rebranding its top-of-the-line Galerie papers. Look for five stars to find the best.

> Obsessed with old-school instant prints? There's a book for you: *Instant Love* (Chronicle Books, 2012), a guide for shooting with the instant cameras and film that are available now.

INSIDE TECH

Flat Field

Like a macro lens, the Edge 80 is designed so that the corners of the frame show the same sharp focus as the center—a flat-field design. Think of the range of focus as a tiltable box that is deeper at f/22 than at f/2.8. In contrast, all of Lensbaby's other optics use a curved-field design, resulting in spots of sharpness when the lens is tilted.

WorldMags.net

Short distance shipping. Far reaching value.

For shipping shorter distances, businesses like Never Enough Auto Accessories use Priority Mail Regional Rate™ Boxes. *If it fits, it ships*®* up to 25 lbs. Simple pricing and no weighing. Boxes come in different sizes, and shipping starts at just $5.04. Learn how they help Misty save big on shipping. Scan this code to request your Priority Mail Regional Rate Shipping Kit or visit **regionalrate.com/13**

Priority Mail®
A simpler way to ship.

UNITED STATES POSTAL SERVICE®

* For mailable items up to 25 lbs. Visit USPS.com® for details.
Offer ends 6/29/12 and is only available while supplies last. Offer valid for one customer per address.
Privacy Notice: For more information regarding our privacy policies, visit usps.com/privacy policy
©2012 United States Postal Service.® All Rights Reserved.
The Eagle Logo, the Letter Carrier Uniform, and the trade dress of USPS® Packaging are among the many trademarks of the U.S. Postal Service.®

HIGH ART

A museum-worthy camera for museum-worthy photos

HE MAY not be a boldface name, but Marc Newson is arguably the world's best-known industrial designer. With work in the permanent collection of the Museum of Modern Art in New York, he's come up with new forms for everything from rocking horses to yachts. And now he's designed an interchangeable-lens compact for Pentax.

This new ILC isn't all about its cool looks, however. Pentax gave it a 16MP APS-C sized CMOS sensor—not the smaller sensor in its Q line. For the new system, Newson also designed a wafer-thin pancake lens to match—a 40mm f/2.8—but the K-01 still accepts Pentax K-mount lenses. Get it in black, white, or Newson's signature yellow.

Pentax K-01
$899, street, with 40mm f/2.8 lens
www.pentax.com

PACKABLE BAG

The latest from Vanguard, with a funny name

LET'S GET THIS out of the way: Vanguard's Xcenior 36 bag is pronounced *ex-senior*. While the appelation is odd, the bag is anything but. With a molded, semi-solid exterior and anti-shock, moisture-resistant bottom, it will tote your gear and protect it well, too. The front and side pockets are generous, so you'll still have space after packing the main compartment. Each pocket has multiple interior slots for better organization. Unlike some shoulder bags, it holds a 14-inch laptop. An attached raincover keeps gear dry, and well-padded handles can make carrying more comfortable.

Vanguard Xcenior 36
$260, estimated street
vanguardworld.com

NEWS FEED

> Many pros swear by shooting tethered, but black USB cables are easy to trip over—a big problem when you're in the midst of a shoot. TetherTools' new TetherPro cables are bright orange, alerting even the clumsiest assistants.

> We're not advocating, subterfuge, but if you *did* want to record video sneakily, you could use Sawnn's new Intros HD PenCam, which looks like an ordinary ink pen.

> Novelty camera straps are not just for your dorky uncle. Strap-maker Mod has new cool-looking eco straps made from upcycled billboard vinyl.

> If you've ever wanted to create a portfolio with video and text that's accessible to anyone with an iOS device, now you can. Treemo Labs' Appafolio lets you do it for free.

New Tablet

Wacom Intuos 5

There's not much competition in pressure-sensitive input devices—when it comes to this kind of tablet, Wacom has cornered the market. Its latest top-of-the-line model, the Intuos5 ($230, $350, or $470, depending on size; wacom.com), lets you use your fingers as well as the usual stylus, and it recognizes standard Windows and Mac gestures. A separate kit lets you go wireless, and you still get plenty of customizable shortcut keys.

THE LOWDOWN

PHOTOSHOP CS6 IN BETA

We love when Adobe releases beta versions of its software. Not only do you get a chance to preview new features, but you also have an opportunity to offer feedback before the changes are written in stone. And CS6 will have a lot to comment on: The whole interface has been updated and streamlined, and there are a ton of new tools. Try it at labs.adobe.com.

WorldMags.net

CONNECT YOUR IMAGINATION

MANFROTTO 050 BALL HEAD SERIES

Extremely lightweight and precise, the Manfrotto professional head provides the very best in controlled and smooth movements to minimize effort and maximize results.

Magnesium means lightweight precision!

90°-105° Portrait Selector.
More versatility for vertical shooting both indoors and outdoors.

Lightweight magnesium body.

Check out the full assortment of Manfrotto products at these Manfrotto Power Partner Retailers:

Ace Photo | Adorama | B&H | Calumet Photographic | LCD4VIDEO
Midwest Photo | Mike's Camera | Norman Camera | Penn Camera Exchange
Robert's Distributors | Showcase Photographic | WB Hunt.

Manfrotto
Imagine More

Manfrotto™
A Vitec Group brand

WorldMags.net

manfrotto.us
info@manfrotto.us

ZOOM IN

Three new pocket compacts with remarkable ranges

THESE CAMERAS are dubbed travel zooms—pocket-sized, but providing big zoom ranges from wide angle to long tele. Each has image stabilization and captures 1920x1080p video in stereo.

While the Canon PowerShot ELPH 530 HS's 12X optical zoom (28–336mm equivalent f/3.4–5.6) has the shortest range of the three, it's also the smallest and lightest: less than an inch thick, and under 6 ounces. A 10.1MP high-sensitivity CMOS sensor sports slightly larger pixels than average, and built-in Wi-Fi makes sharing photos easy.

Nikon's Coolpix S9300 wins the megapixel count here at 16MP; its 18X f/3.5–5.9 optical zoom is an equivalent 25–450mm in full-frame terms. Yet it still measures less than 1.5-inch thick. Built-in GPS lets you geotag images, and, besides the usual digital filters, the S9300 also allows in-camera fixes such as cropping and shadow/highlight boosting.

The 14.1MP Panasonic Lumix DMC-ZS20 tops the zoom range with 20X, a 24–480mm equivalent f/3.3–6.4, making its 1.1-inch thickness remarkable.

Canon PowerShot ELPH 530 HS
$350, street
usa.canon.com

Nikon Coolpix S9300
$350, street
www.nikonusa.com

Panasonic Lumix DMC-ZS20
$350, street
panasonic.com

The built-in GPS records the names of locales as well as geographic coordinates, and more detailed travel info can be installed in the camera from an included DVD, using an SD card.

NEWS FEED

> The winners of the 55th World Press Photo contest have been announced. Visit worldpress photo.org to see some amazing documentary pictures.

> Photographers may have mostly gone digital, but film nostalgia is alive and well in the form of software plug-ins. The latest comes from Digital Film Tools (DFT). Called Film Stocks, it simulates 288 still, movie, and historic film types.

> Need a small TTL flash but don't have a lot of dough? ProMaster just announced its FL100, compatible with Canon, Nikon, Olympus Panasonic, Pentax, and Sony cameras. Price? Just shy of $100.

> We hope to see some new Micro Four Thirds lenses soon: Tamron and Tokina have joined the Micro Four Thirds System Standard Group.

TOOLBOX

SPEEDSTER

A flash drive that transfers data lightning fast

AS USB 3.0 becomes more common, new hardware is hitting the market that can take advantage of its higher speeds. Lexar's JumpDrive Triton flash drive (lexar.com; $80, $125, and $200, estimated street for 16GB, 32GB, and 64GB sizes) does just that. While a standard USB 2.0 drive could take about 11 minutes to copy a 4GB movie, Lexar says the Triton needs only 35 seconds. The drive has a metal alloy base and a retractable connector. It's compact given its capacity, so you'll be able to carry and share lots of photos and videos wherever you go.

80%

of consumers whose phones shoot video use them to do so.

60%

of consumers whose still cameras shoot video use their cameras for that purpose.

SOURCE: InfoTrends

WorldMags.net

SONY ARTISANS OF IMAGERY: MASTERS OF HIGH-PERFORMANCE IMAGING

"I'm basically a visual storyteller. My mission is to move people to look at the pictures I create and to think—to see things from a new perspective, whether it's individuals, places, traditional cultures, or commercial enterprises."
— David McLain

© David McLain

DAVID McLAIN

A VISUAL VIRTUOSO, HIS UNFORGETTABLE IMAGES CAPTURE THE ESSENCE OF THE HUMAN STORY WITH AUTHENTICITY AND PASSION

"I'm basically a visual storyteller," says David McLain, a renowned editorial and commercial photographer who's been shooting professionally for more than two decades, and whose riveting images have appeared in *National Geographic*, *Smithsonian*, and *Time*. "My mission is to move people to look at the pictures I create and to think—to see things from a new perspective, whether it's individuals, places, traditional cultures, or commercial enterprises. One of my proudest accomplishments was the *National Geographic* cover image I shot for my story on the longest-lived people in the world—it's a real grabber, a picture of Japanese man in his 80s standing on his head."

"I've used Sony cameras exclusively for nearly 4 years," observes McLain. "Recently I've been shooting with the Sony a77 and the NEX-7, both great cameras that let you do more with less. The a77 not only captures an amazing 24.3 megapixels, it's also fast, responsive, compact, and can capture sweep panoramas, bursts at an astonishing 12 frames per sec, and gorgeous Full HD video at 60p, or at 24p for a classic cinematic feel. Its ultra-cool LCD pivots and rotates on-axis in every direction for maximum viewing flexibility. The new Sony DT 16-50mm f/2.8 SSM, the standard zoom for the a77, is really sweet—a pleasure to use and phenomenally sharp. The high-magnification OLED EVF in both cameras is brilliant and it lets you preview exposures and effects. As for the 24.3 MP NEX-7, it's fast, easy and fun and the results are absolutely fantastic. I totally love its unique Tri-Navi 3-dial control system—it's intuitive, programmable, and even looks cool. I can put it in my pocket with that exquisite 24 f/1.8 Zeiss Sonnar T* lens and cover almost anything. It's a totally pro camera."

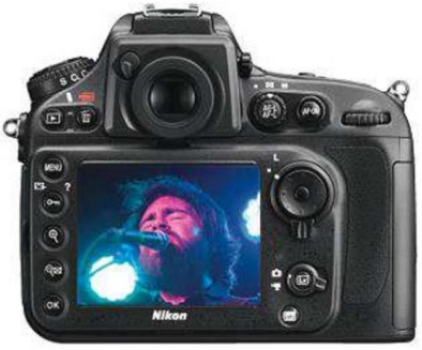
"Both Sony a77 and NEX-7 represent the future of photography," concludes McLain, "a breakthrough that goes beyond traditional camera design to deliver a totally professional level of performance in the smallest, most useable form factor. If fast and light are your priorities and imaging excellence is your goal, this is definitely the right stuff."

What is a Sony Artisan of Imagery? The Sony Artisan of Imagery program includes some of the most respected professional photographers worldwide. Each Artisan has a unique style and vision with their photography but they all rely on one product, the Sony Alpha.

Sonystyle.com

SONY make.believe

AMATEUR PRO



Nikon D800
$3,000, street
www.nikonusa.com

PIXEL PUSH

Nikon's D800 is the new megapixel master

AT LONG last, Nikon shooters have a follow-up to the mid-level full-frame D700. And at 36.3MP, the new D800 is the reigning pixel-count champ, with almost 12MP more than Nikon's own D3X and Sony's Alpha 900.

Better yet is the fact that the D800 includes all the video features (1920x1080p30 capture and uncompressed HDMI output) that Nikon's pricier D4 boasts in a body that costs half as much.

Other than size, the differences between the two cameras (the smaller D800 lacks a built-in vertical grip) mostly stem from the difference in pixel count, where the D4's 16.2MP sensor gives it a big advantage in speed and sensitivity. The D800's burst rate peaks at 4 frames per second in full-frame mode and 5 fps in DX-crop mode (6 fps with the optional MB-D12 battery grip), versus 11 fps for both on the D4. Sensitivity ranges from ISO 100 to 6400, expandable to ISO 50 (Lo-1) to ISO 25,600 (Hi-2)—not quite the 204,800 of the D4.

While the Nikon D4 has a slot for the new XQD-format memory card, the D800 will have one slot for Compact Flash and another for SD cards.

Like its big brother, the D800 sports a 91,000-pixel RGB metering system that works in conjunction with the 51-point AF system to track moving subjects based on shape and color. Its 3.2-inch LCD is fixed, but its 921,000 dots ease framing in live view or video mode. The dedicated Live View button, nested inside a switch for still or video mode, makes it seamless and simple to alternate between video and stills, or live view and the optical finder. And the optical finder claims 100-percent accuracy and 0.7X magnification.

Citing demands from video shooters, Nikon also plans to offer a version of the D800 without the low-pass anti-aliasing filter. This model—dubbed the D800E—will cost an extra $300 at launch. According to Nikon, the latest version of Capture NX2 software, designed to work with the D800E, will include a Color Moiré Correction tool to deal with artifacts that the lack of an anti-aliasing filter might cause.

—Philip Ryan

MATTHEW ISMAEL RUIZ (LCD IMAGE)

WorldMags.net

Whether you're a Memory Keeper or a Pro,

we have your card.

Kingston® has the Secure Digital High Capacity card you need, whether you take photos for a living or for your family scrapbook. They're available in Class 4 and Class 10, so there's one that's ideal for your camera and shooting style, and they're backed by a lifetime warranty, free technical support and legendary Kingston reliability.

Visit **kingston.com/us/flash/sd_cards** to learn more or order from one of our etail partners today!

Kingston TECHNOLOGY

©2012 Kingston Technology Corporation, 17600 Newhope Street, Fountain Valley, CA 92708 USA. All rights reserved. All trademarks and registered trademarks are the property of their respective owners.

ADORAMA amazon.com B&H BestBuy.com J&R TigerDirect.com

POPULAR PHOTOGRAPHY presents

digitaldays
Photography & Video Workshops

GRAB YOUR CAMERA AND

LEARN TO SHOOT LIKE A PRO

NEW FOR 2012
INDOOR AND OUTDOOR PHOTO SHOOTS!

Digital Days is a photo and video workshop series that travels around the country to 15 cities a year, reaching thousands of photography enthusiasts of all levels. Workshop attendees will learn all about their camera's functionality and how to take better photographs through live demonstration sessions and hands-on instructions. At all workshops, attendees will learn how to shoot indoors with lighting stations as well as in natural-light photo sessions that showcase the many techniques of shooting outdoors.

MEET OUR INSTRUCTORS

LESLIE FISHER
Pro photographer

MARK REIS
Pro photographer

BEGINNER AND ADVANCED PHOTOGRAPHY WORKSHOPS OFFERED.
SIGN UP FOR ONE, TWO OR THREE CLASSES!

CLASSES STARTING AT $69 PER WORKSHOP!

SIGN UP NOW AT DIGITALDAYSPHOTO.COM

WorldMags.net

sponsored by SONY make.believe

UPCOMING LOCATIONS

LONG ISLAND, NY MARCH 31 - APRIL 1

DALLAS, TX APRIL 14-15

CINCINNATI, OH APRIL 28 - 29

SAN FRANCISCO, CA MAY 19-20
CHICAGO, IL MAY 26-27
PHILADELPHIA, PA JUNE 2-3
BOSTON, MA JUNE 9-10
ATLANTA, GA JULY 7-8
SEATTLE, WA JULY 28-29
MINNEAPOLIS, MN AUGUST 4-5
RICHMOND, VA AUGUST 11-12
SAN DIEGO, CA SEPTEMBER 8-9
ANN ARBOR, MI SEPTEMBER 22-23
HOUSTON, TX OCTOBER 13-14
FAIRFIELD, NJ DECEMBER 15-16

©MARK REIS

Find us on Facebook DIGITAL DAYS

THREE GREAT PHOTOGRAPHY WORKSHOPS

DIGITAL FUNDAMENTALS

Have you just purchased a DSLR camera or plan on purchasing one in the near future? If you don't know what an F-stop and shutter speed is, then this course is for you.

EXPANDING THE FUNDAMENTALS

Want to finally take your camera out of auto? Then this is the course for you. You know all the modes on your camera, but you want to take more control of the photos you take and use more of your cameras functionality.

INTERMEDIATE HANDS-ON PHOTO

You are now off auto mode and ready to expand your photography. This hands-on workshop will teach you all the tips and techniques of shooting indoor and outdoor photography.

COME AND EXPERIENCE THE LATEST AWARD WINNING CAMERAS FROM SONY.

WWW.SONY.COM/ALPHA
WWW.SONY.COM/NEX

Download the FREE tag reader at http://gettag.mobi.

WorldMags.net

PICTURE TODAY
INSPIRE TOMORROW

On May 15 2012 photographers all over the world will create an unprecedented visual record of daily life. The photographs taken will be the source for scientific research, educational tools, books, exhibitions and a unique web experience.

Join at aday.org and use the power of photography to create, share and inspire perspectives by documenting what is close to you. Leave a message for the future and share your day on May 15!

ADAY.ORG

Aday.org is initiated by the Swedish non-profit foundation Expressions of Humankind. The foundation's global advisory board includes Archbishop Desmond Tutu, Sir Richard Branson, founder of Virgin Group, Martti Ahtisaari, Nobel Peace Prize Laureate and former President of Finland, Gro Harlem Brundtland, former Prime Minister of Norway, Mary Robinson, former President of Ireland and former United Nation High Commissioner for Human Rights, Jan Eliasson, former Swedish Foreign Minister and elected President of the United Nations General Assembly, and Robyn, singer, songwriter and producer.

MEDIA PARTNER POPULAR PHOTOGRAPHY

PARTNER snapfish

FOUNDING PARTNER ERICSSON

WorldMags.net

SHARE

CONVERSATION, INSPIRATION, CONTESTS, AND YOUR QUESTIONS ANSWERED

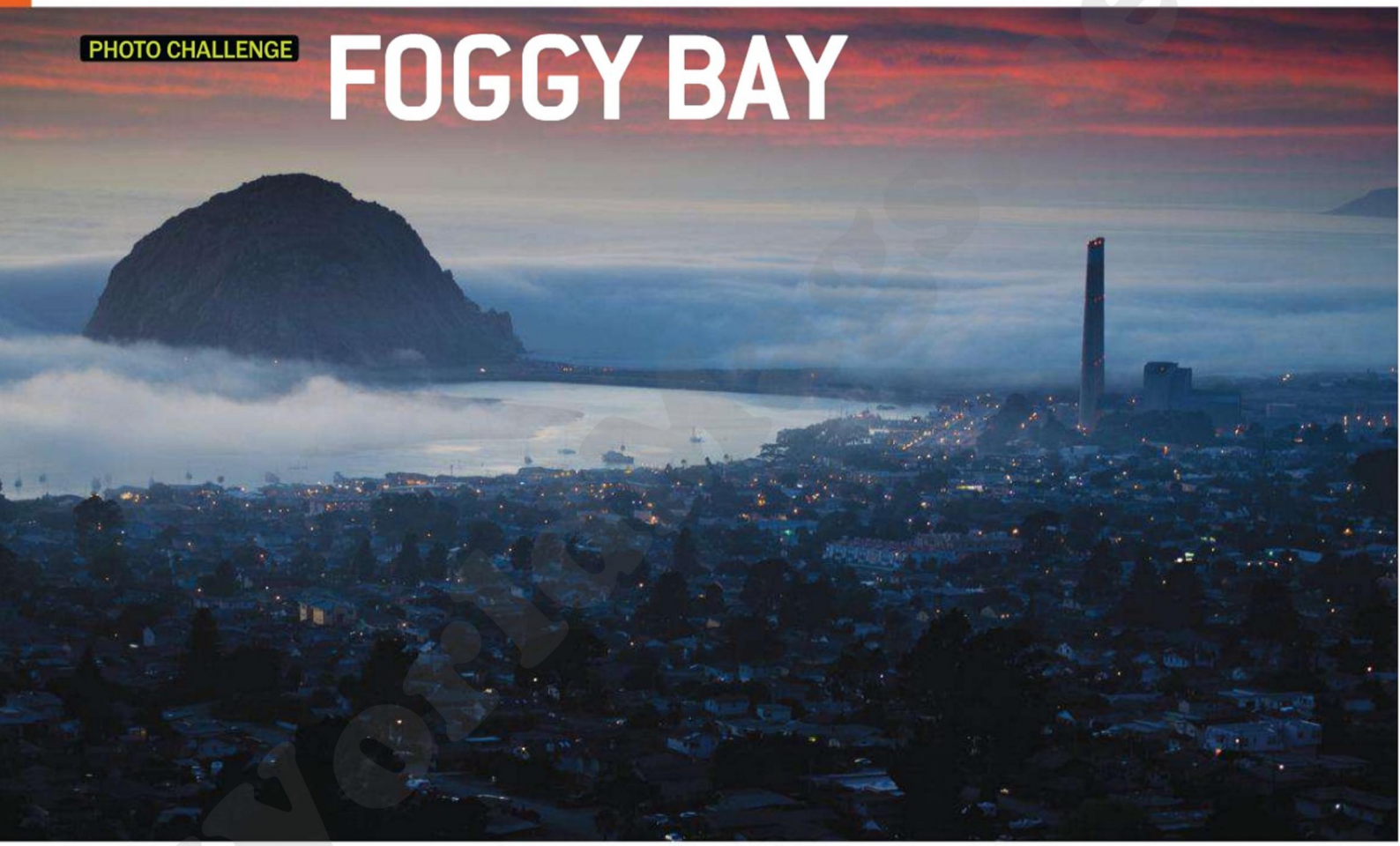
NEW YORK CITY WITHOUT CROWDS 24

SHOOTING YOGA IN THE OUTDOORS 26

CAPTURE THE ACTION AT ITS PEAK 34

PHOTO CHALLENGE

FOGGY BAY



DAVID MCCURRY

Morro Bay at dusk takes our twilight photo prize

FULL OF enthusiasm after a class at the California Photo Festival, David McCurry trudged up Black Hill in Morro Bay, sunk his Slik Pro 700DX tripod into the earth, and waited for dusk. "The fog started to roll in, surrounding Morro Rock," says McCurry, 50, who lives in Goleta, CA. "It covered the boats in the bay with a blanket of white, just as the lights in the town were beginning to emerge."

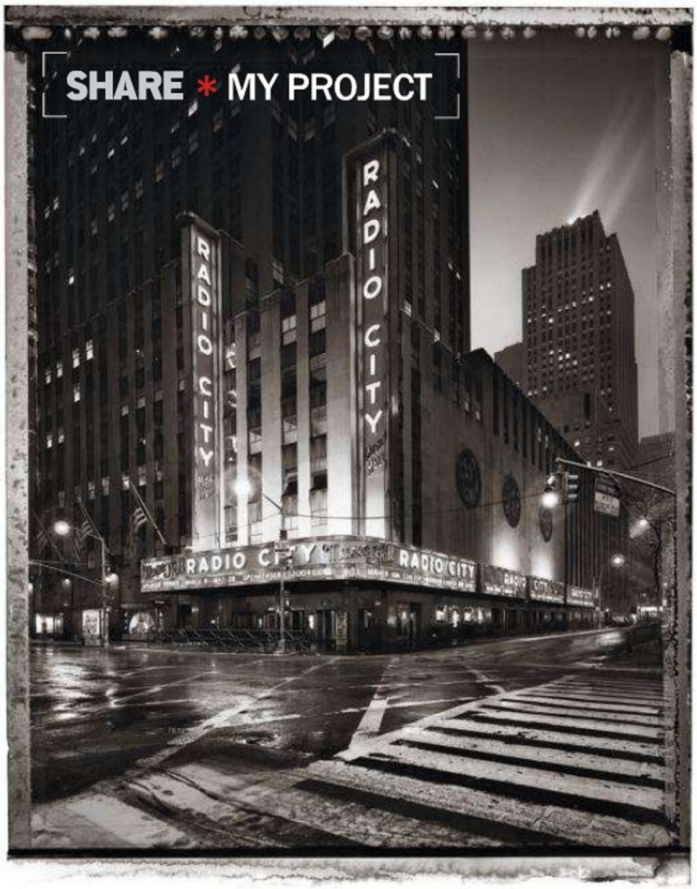
Morro Rock, the most popular of the "nine sisters" of San Luis Obispo County, is a 576-foot-tall lump of volcanic rock jutting out into the bay—a comely model for landscape shooters.

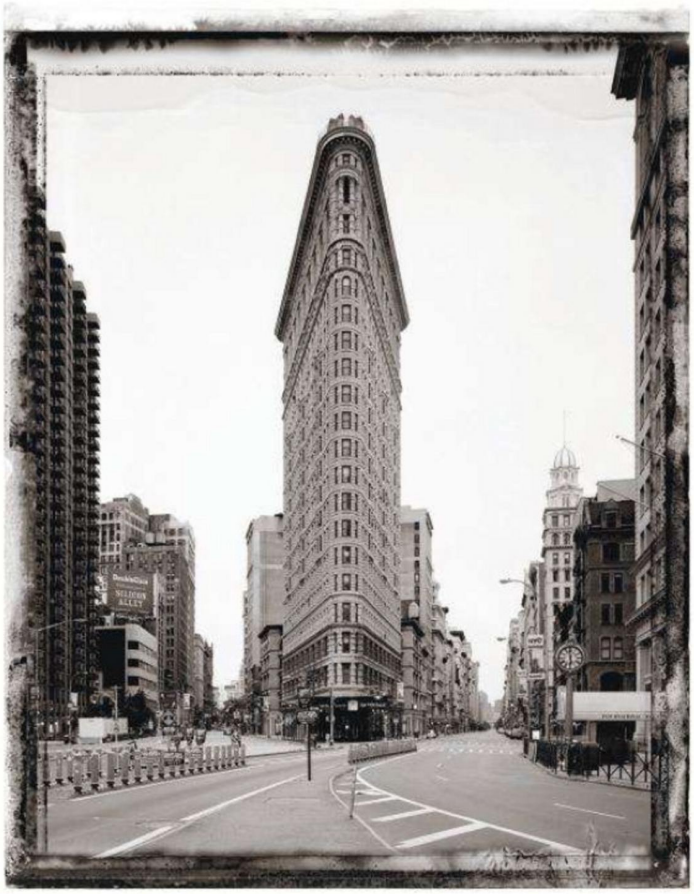
McCurry lugged his gear up a mosquito-infested switchback trail for this subtle view of Morro Bay, CA.

He set his Nikon D7000 to ISO 200 and zoomed his 55–200mm f/4–5.6 Nikkor lens to 60mm as the sky began to glow a reddish orange. The exposure—0.3 sec at f/5.6—elegantly captured the briefest and subtlest of moments, when day departs by way of night. *—Matthew Ismael Ruiz*

NEXT PHOTO CHALLENGE **In Lighting (page 48), Cary Norton captured barroom atmosphere in tricky available light. Your best shot taken in mixed lighting conditions could win $100. The rules? Visit PopPhoto.com/contests. Deadline: April 30.**

WorldMags.net





City at Rest

New York without the crowds

CHRISTOPHER THOMAS (8)

WHEN MUNICH-based photographer Christopher Thomas looks at contemporary photos of cities, he longs to see the landscape without city traffic. "I miss the pureness of images from 100 years ago, where you could see the architecture without cars and pedestrians," he says.

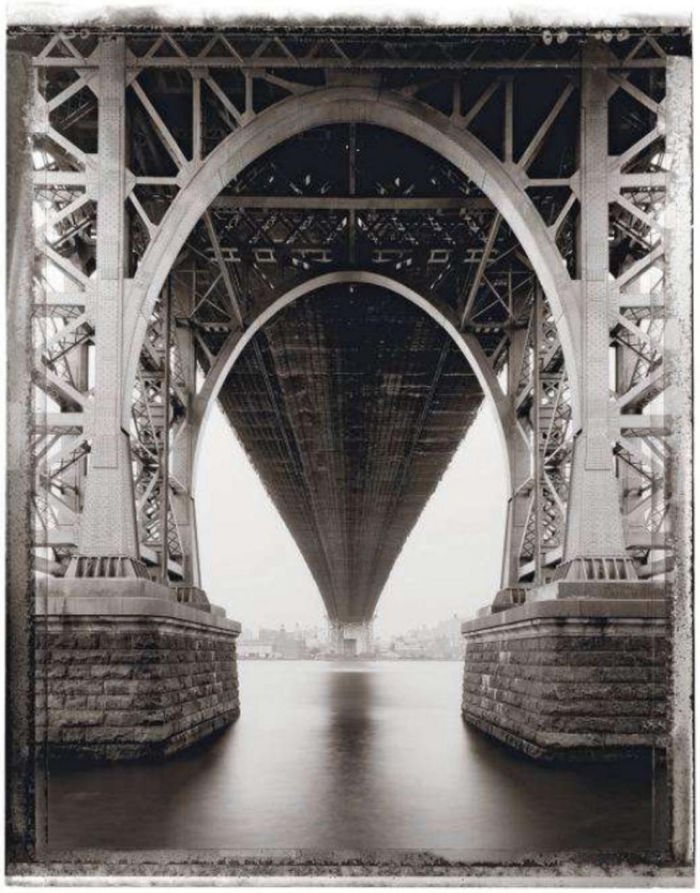
So when he first took an apartment in New York in 2000—where he would live part-time for 10 years—he decided to try to capture the city without the traffic, using extremely long exposures on Polaroid Type 55 film in his Linhof 4x5 camera. He took up the project in earnest in 2007, and the haunting and melancholic series, "New York Sleeps," was shown at the Stephen Kasher gallery in 2009.

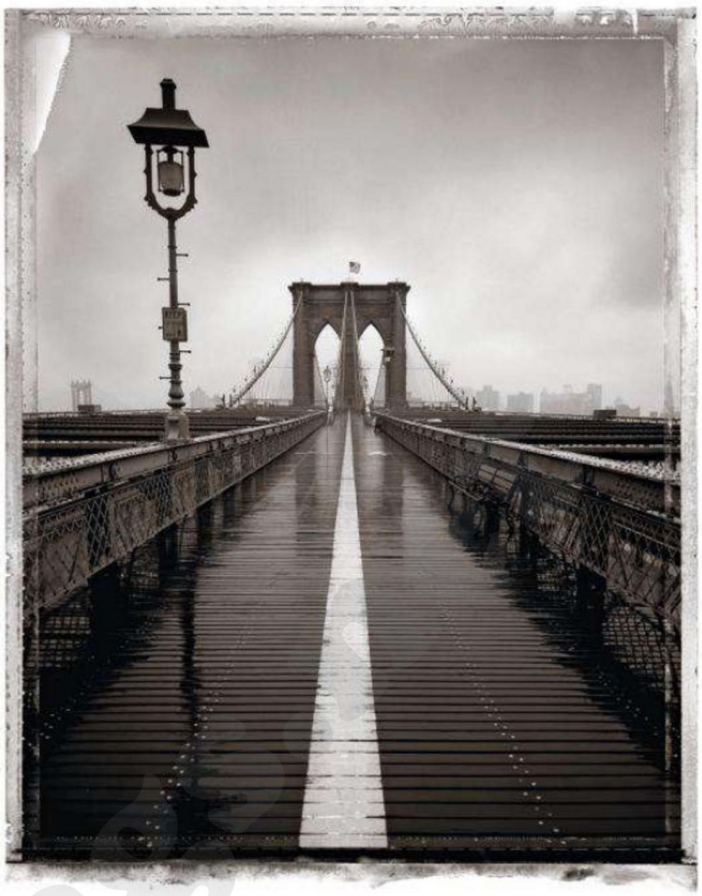
He started with well-known landmarks such as the Flatiron

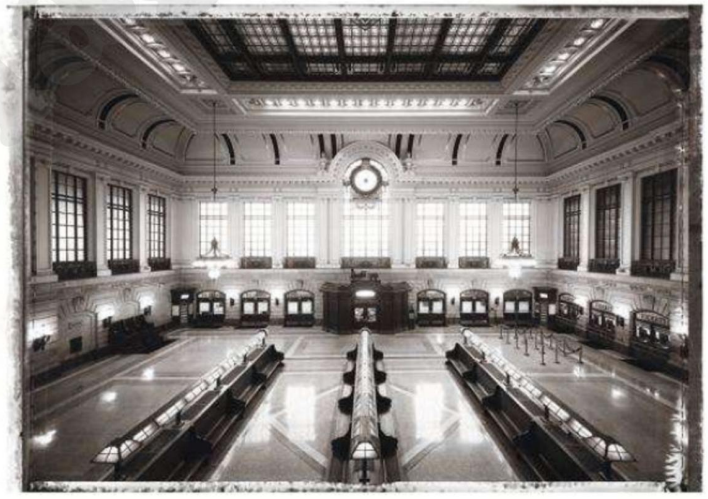
Christopher Thomas' 2009 book, *New York Sleeps*, was published by Prestel USA.

CHRISTOPH ADLER

WorldMags.net







Long exposures erased New York's traffic and crowds, both outdoors and in landmark buildings, and gave these photos a timeless feel.

Building and Grand Central Terminal. To avoid crowds, he'd arrive very early in the day or late at night, setting up his tripod for exposures of up to 10 minutes.

Obstacles abounded: Drivers would park in front of the camera and refuse to move, and sites such as Madison Square Park required a permit. In the nonstop traffic of Times Square, he would cover his lens whenever cabs approached.

He later sought out more off-beat areas by biking to NYC's outer boroughs. "I'd look for locations with a certain solitude and with graphically beautiful views of architecture," Thomas says.

Many times, he shot during snowfall to help blur out pedestrian traffic. In other cases, his film, which produced both an instant print and a negative for later, proved helpful. Once, making a print of some Bronx kids convinced them to stay out of his shot. Another time, when he scaled a fence into a residential parking lot in the Rockaways, offending some tenants, his photographs won them over. "They came out yelling and threatening to call the police," he says. "But after I showed them the prints, they invited me to dinner."

Looking back, Thomas cherishes his memories as well as the images. "I'd be waiting for ages in the freezing cold, or I'd be sharing sandwiches with a gardener I'd just met," he says. "Each one was an experience." ***—Lori Fredrickson***

WorldMags.net

LIZ ALBRIGHT

Yoga Practice

Shooting the human form in nature

Baltimore-based yoga shooter Bill Tipper uses his balance of technical and philosophical knowledge to create images of the human form in nature. See his work at billtipper.com and PopPhoto.com/tipper.

Do you shoot only yoga? About 75 to 80 percent of my work is in the world of yoga—I shoot a lot of conferences and retreats. I shoot for teachers and studios, as well as workshops in places like Belize, Costa Rica, and Hawaii. I travel about two months of the year, and that has opened up work for hotels and eco-resorts. I also shoot for yoga clothing companies.

Which did you love first, yoga or photography? Photography was my first love. I started as a teenager, went to art school, and majored in visual communications. I worked in film and multimedia for most of the 1990s and early 2000s—I ran huge projects with big budgets, but I was losing a lot of the creative joy that had sustained me.

How did you turn to yoga? On a shoot for a college in Massachusetts, I drove by the Kripalu Center for yoga and holistic health. I stopped on a whim and asked for the creative director; I showed her my portfolio, and she hired me on the spot. The next morning I was doing a sunrise shoot with a yoga teacher. I found myself in this amazing moment with every element a photographer could dream about coming together. It was an epiphany; shooting yoga is what I wanted to do. That was six years ago.

Do you practice? I'd studied yoga philosophy and meditation for more than 10 years before my first shoot; now I practice a hybrid of many types of yoga. Knowledge and personal practice are essential for a yoga photographer.

Do you shoot only outdoors? I shoot in a studio sometimes, but my signature is combining the beauty and lines of nature with the beauty and lines of yoga poses. The majority of my shoots take place at sunrise or sunset, so I'm working with magic light. It allows me to create something that speaks emotionally to the viewer.

Walk us through a shoot. I treat it as collaboration with the yoga teacher or model. We arrive at the location an hour before sunrise and sit and meditate together so the model can feel grounded. Often, it's the first time they have practiced in nature, which presents a lot of challenges for balance and focus. We shoot from just before sunrise to an hour or so after sunrise.

Do you follow a shot list? Only if it's requested by a client. Mostly it's just an organic flow. I provide a lot of direction for the poses I think will look best in that environment—I love to mimic lines in nature.

What gear do you use? I carry two bodies, the Canon EOS 5D Mark II and 7D, and up to four lenses. My go-to lenses are Canon's 17–40mm f/4L and 70–200mm f/2.8L zooms. Since I have to hike to locations, I use a Lowepro Nature Trekker bag. I always use a Gitzo carbon-fiber tripod in low light. Most of my work is in natural light, but I use two Canon Speedlites for fill. I use a Singh-Ray Vari-N-Duo variable neutral-density polarizing filter that takes up to 8 stops off the exposure, so I can use a slow shutter speed (even in bright light) and create more impressionistic images. I love working in low light and bringing in intentional camera movement and slow exposures.

What's your biggest challenge? Postproduction—it can be laborious because of how much I shoot.

What do you like most? The moment of taking an exposure. I get giddy with excitement when I take a picture that I know in that moment is something special, memorable, and emotionally powerful.

—Interviewed by Kathleen Davis

WorldMags.net

MPIX ROCKS!
I value the excellent customer service and professional quality products that I receive when ordering from Mpix. Knowing that after I place an order, I have products in hand within a few days keeps me always coming back for more.
Megan Rogers
Professional Photographer/Mommy to Three Terrific Children, from Topeka, Kansas
mpix
Learn more about Megan (and see her favorite products) at www.mpix.com/MeganRogers

WorldMags.net

Popular Photography Remembers

Michihiro Yamaki

Ingenious innovator, marketing genius and faithful friend, he was an industry giant who will be sorely missed.

The founder, CEO, and guiding force behind Sigma Corporation for over half a century, Michihiro Yamaki was beloved by all for his rare combination of intellectual brilliance, impressive business acumen, extraordinary foresight and leadership, and warm-hearted personal charm. Anyone who had the privilege of knowing him feels a sense of personal loss at the passing of this truly great man who has done so much to serve the imaging industry he loved.

A pioneer in establishing the independent lens market, he was the visionary who developed the first-ever rear lens converter, went on to transform Sigma into a leading independent lens maker, and spearheaded the acquisition of Foveon, establishing Sigma as an innovative high-tech camera manufacturer. The Sigma Corporation, which will now be led by his son Kazuto, is his enduring legacy.

Crowd Funding
In less than three years, some 500 photographers, independent book publishers, product designers, and other photo-related project creators have turned their dreams into a reality. How? By sourcing money from the crowd in an online incubator called Kickstarter.
By Matthew Ismael Ruiz

DAN BRACAGLIA

Photo Don't

I was appalled when I turned the page to read "Crowd Funding" (February 2012). There, staring me in the face, were two rather large single-digit fingers! Not cool at all. I see this type of picture more often on photo websites and still fail to find any artistic value in it, but to find it in a well-published magazine like Popular Photography just sucker-punched me in the gut. Not to mention that my 7-year-old daughter was looking over my shoulder. I will find it hard to renew a subscription to your magazine when I have to worry about the censorship of my little ones thumbing through it. Fail.

Ken Barbret
Rex, GA

IN YOUR February issue (Tech Support), you gave reader Tony Franco good advice on filters for infrared film photography. Equally important is the type of film camera he might use, as many are *not* leakproof for IR wavelengths and can fog IR film. Check with the manufacturer or go online for suitable equipment. ***Steven Grueber***
Denver, CO

ANDREW GENTRY'S February letter brought me to stop at the Lighting page by Peter Kolonia. His discussion of Teru Onishi's method was quite interesting. Paying attention to the lighting placement and reviewing the photo brought out another group of revealing pictures: The ice cube, above the mint sprig, has two comical line faces, while the left ice cube has several faces depending on the way you turn the photo. What a wonderful surprise within a commercial work of art. ***Bob Phipps***
Lenoir, NC

IN THE PHOTO taken by Laura Barisonzi at a marathon (You Can Do It, February), there is nothing

sharp! The cups are out of focus; even the pavement is blurry. With a 50mm lens at f/10, everything from 5 feet to infinity should have been in focus. I would give her a C– for showing up.

Ezekiel Tarango
Glendale, CA

YOUR COLUMN (Editor's Letter, December 2011) laments the rise of "trendy" "low-fi" cameras. While such cameras are not what Popular Photography deals with, I'd like to point out that the perpetual striving for ever greater resolution and ever more detailed photographs is not, in and of itself, a worthy goal. On occasion, a photograph actually benefits from a more low-tech approach.

Jeffrey Langford
New York, NY

REGARDING "Radio Versus Infrared Triggers" (October 2011), radio systems tend to outperform IR in range and reliability in most cases. One should also consider if one needs wireless TTL support or just a simple flash trigger, frequency regulations, reliability reviews, and cost. While PocketWizards and RadioPoppers are the best-known TTL triggers, they do not operate in the 2.4 GHz ISM band like the Phottix Odin, Pixel King, or Paul C. Buff CyberSyncs (non-TTL) do, so different versions are needed for use around the world. Many reliable and very affordable 2.4 GHz non-TTL trigger kits can be found online. It's never been easier to get started with wireless off-camera flash!

Brian Wiese
Stuttgart, Germany

POPULAR PHOTOGRAPHY

HOW TO CONTACT US Address your questions or comments on editorial content to Popular Photography, 2 Park Avenue, New York, NY 10016; e-mail, PopPhoto@bonniercorp.com. Published letters may be edited for length and clarity. We regret that we cannot answer all letters. Editorial contributions sent by mail must include return postage and will be handled with reasonable care; however, we assume no responsibility for return or safety of photographs, disks, or manuscripts.

SUBSCRIPTIONS Phone 386-246-0407 or visit PopPhoto.com/cs for all subscription inquiries. Please allow at least 8 weeks for a change of address; include both your old and new addresses, and if possible an address label from a recent issue. Subscription prices: U.S.: 1 year, $14; 2 years, $28; 3 years, $42. Canada (includes 5% GST) and all other foreign: 1 year, $31.93; 2 years, $55.94; 3 years, $77.94. Occasionally we share our information with other reputable companies whose products and services might interest you. If you prefer not to participate, please contact us at 386-246-0407 or PopPhoto.com/cs.

REPRINTS AND EPRINTS Please contact Brian Kolb at Wright's Media, 877-652-5295, bkolb@wrightsmedia.com.

THIS PRODUCT IS FROM SUSTAINABLY MANAGED FORESTS AND CONTROLLED SOURCES.

PEFC
PEFC/29-31-58

VANGUARD
www.vanguardworld.com
AUCTUS Plus Series Professional Tripods
(ESHP) Extreme Support Height Positioning Wheel System
Sand proof leg locks
Legs adjust to 25, 50 & 80 degree angles
3/8" to 1/4" adapter wheel
For studio or outdoors
• Ultra stable
• Precise positioning & fine tuning
• Supports extreme loading weight
Available in aluminum and carbon fiber models
FREE SBH-300 Ball Head
With Any Auctus or Auctus Plus Tripod!
Curved rubber feet provide solid footing at any angle and convert to anti-rust spikes.
Includes bonus snow shoes.
You can find Auctus Plus and other VANGUARD accessories at these retailers:
Adorama (NYC) www.adorama.com 800-223-2500
B & H Photo (NYC) www.bhphoto.com 800-947-9915
Samy's Camera (6 Southern CA Locations) www.samys.com 800-321-4726
Ryther Camera (Linden, NJ) www.rythercamera.com 877-644-7593
Dodd Camera (17 Ohio Locations) www.doddcamera.com 800-507-1676
Abe's of Maine (Edison, NJ) www.abesofmaine.com 800-992-2237
www.vanguardworld.com | 800-875-3322 | VANGUARD USA Inc. Whitmore Lake, MI 48189
Distributed in Canada by Digitec Trading Inc. www.digitectrading.com
Join us on flickr flickr.com/photos/VanguardPhotoUs facebook.com/VanguardPhotoUS twitter.com/VanguardPhotoUS

WorldMags.net

WorldMags.net

Get Shallow

Why your compact and *bokeh* don't mix

DEBBIE GROSSMAN

SHALLOW DEPTH of field is often a good thing; a defocused background (especially in portraits of people or animals) eliminates distracting detail and can create an ethereal, paint-like effect.

But as a survey of our Facebook page and forums suggests, some of you are having a hard time achieving that kind of shallow depth of field. We know the likely culprit.

First, the basics. In any given format, an increase in subject magnification or larger aperture decreases depth of field; lesser magnification or a smaller aperture increases the depth of field. (You can boost magnification by going to a longer focal length, getting closer to the subject, or both.)

Note that we said, "In any given format." Without getting into the optical math of it (be glad), a smaller film frame or digital sensor will provide greater depth of field than a full-frame (35mm) format, given the same magnification and aperture.

How much more? A quick but fairly accurate method of calculation is to multiply the crop factor of your less-than-full-frame sensor by the f-stop in use; this will give you the equivalent f-stop in terms of DOF on a full-frame sensor. Example: Say an APS-C-sensor camera with a crop factor of 1.5X and a normal lens is focused to 10 feet and set to f/8. This will achieve the same DOF that you would get at f/12 (8 x 1.5) on a full-frame camera with a normal lens, focused at the same distance—about 1 stop down. With a Four Thirds camera (crop factor 2X), that f/8 on your normal lens would yield the same depth of field as f/16 on the full-framer, or 2 stops down.

You can see where this is going. Compact cameras with the typical 1/2.3-inch sensor have crop factors of about 5.6X (the normal focal length for these cameras being about 9mm). So even if you have one of those compacts with a bright f/2 maximum aperture, you will get the same depth of field as you would at (take a deep breath) f/11 on a full-frame sensor.

So APS-C and Four Thirds shooters may want to invest in at least one piece of fast glass (think f/1.4) for portraits and the like. As for compact users, well, look for plain backgrounds. A growing number of compacts (such as the Sony Cyber-shot TX200V profiled on page 12) also have a background defocus feature.

Use the online calculator at dofmaster.com/dofjs.html to check out the depth of field for various camera/lens setups.

INTRODUCING EDGE 80

Classic portrait and innovative tilt photography in one 80mm optic. Uncommon 12-blade aperture for beautiful bokeh. German engineered glass for superb contrast and clarity.

For use with Lensbaby's compact and intuitive bending lens bodies. Part of the Lensbaby Optic Swap™ System.

LENSBABY
lensbaby.com/edge80

Q&A

Monitor Calibration

Q I am a non-pro photo enthusiast who wants good-looking prints. In the Datacolor Spyder4 monitor calibration system, which version—Express, Pro, or Elite—will be the best investment for top image quality?

Dustin Weinreich
Seneca, IL

A *All three Spyder4 calibration kits use the same hardware; the primary difference is in the included software. You won't need the Elite model ($250, street), which has high-end features more suitable for a pro. The Pro version ($170) allows profiling more than one display, so if you have multiple monitors, you'll need it. It measures ambient light, useful if the lighting of your workspace changes. Otherwise, the $120 Express will serve your needs just fine.*

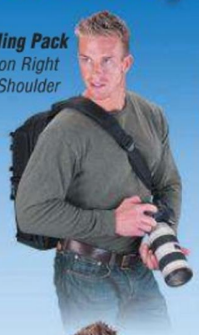
NEW Evolution Series

3 ways to Carry

Holds a Laptop

3 ways to Access

Sling Pack on Right Shoulder



Backpack on Both Shoulders

Sling Pack on Left Shoulder

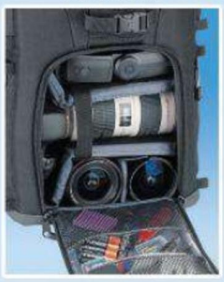
Left Side Access

Right Side Access

Evolution 8 model 5788

Tamrac's new Evolution Series backpacks provide an unprecedented level of versatility. With their unique harness system, the Evolution Series backpacks can be carried three ways while Tamrac's Triple Access System™ provides three ways to access your gear. In addition to a DSLR with a lens attached, the Evolution 8 also carries a laptop, tripod, and other accessories and personal items.

Front Access



For a FREE 80 page Color Catalog, call toll-free 1-800-662-0717

See the VIDEO online
www.tamrac.com

tamrac®
PHOTO, LUGGAGE & COMPUTER CASES

Q&A

The Big Blowup

Q I have several pictures from 35mm Kodak Ektachrome and Kodacolor blown up to 2x3 feet with stunning results, and grain so small you need a good loupe to see it. Will any digital camera give me the same results?

Steven Cole
Lowell, MI

A *A long-standing guideline states that "photo quality" in a print enlargement requires a resolution of at least 200 pixels per linear inch. For a 24x36-inch print, this would mean 4800x7200 pixels, or (gulp) 34.6 megapixels. The Nikon D800 (page 18), as well as medium-format digital cameras, could do it.*

But you don't need that many pixels. Putting your nose up to a print isn't the normal way to view display art. A proper viewing distance for a 2x3-foot print would be at least 4 feet away, so any 24MP DSLR or ILC now on the market would provide more than adequate resolution for a print of that size. (The greater the viewing distance, the less resolution is needed. A billboard uses about 10 pixels per inch, or less.)

And you may not need even 24MP, particularly if you shoot RAW files. Software applications such as onOne Perfect Resize 7 and Alien Skin Blow Up 3 let you make big blowups with surprisingly little loss of apparent resolution. So you might be able to do that 2x3-footer with a file from a 12MP camera.

© Anthony Neste

american PHOTO MODEL SHOOT

1 day
Beautiful Models
Build Your Portfolio

Learn from professional photographers as you fill your portfolio with beautiful photos. We provide models, sets and lighting so all you need is your camera and creativity.

Early Bird Special $249
Save $30!

Offer ends April 1, 2012

2012 SCHEDULE

June 16th - Seattle, WA
July 21st - St. Louis, MO
Aug 18th - Los Angeles, CA
Sept 15th - Austin, TX
Oct 6th - San Francisco, CA
Nov 17th - New York City, NY
Dec 1st - Ft. Lauderdale, FL

Sign Up Today!

AmericanPhotoModelShoot.com

Presenting Sponsor

SIGMA

Come try out the new line of Sigma lenses!

Lindsay Adler
Sigma Pro Photographer

Anthony Neste
Professional Fashion & Editorial Photographer

Kevin Ames
Sigma Pro Photographer

Mark Reis
Professional Photojournalist

FOLLOW US ON American Photo Model Shoot | Youtube.com/apmodelshoot | @APModel Shoot

WorldMags.net

Peak Action

Three approaches to capturing a fleeting moment

MONTHLY PHOTO CONTEST

Want to enter? Get the official rules and upload your images at PopPhoto.com/contests.

3rd Place $100 Prize

NICK BENSON, 24, ART STUDENT, WEST HARTFORD, CT "Fireworks emit various levels of light and have extreme differences in their peak position in the sky, and the size of their combustion is unpredictable. On my second attempt at photographing fireworks, I averaged the time it took for each to reach its peak height before exploding, then manually focused on the center of most of the explosions. I held the shutter open, zooming out slightly while turning the focus ring in two gradual steps." **TECH INFO: Tripod-mounted Nikon D7000 with 55–300mm f/4–5.6 Zoom-Nikkor lens and Nikon MC-DC2 remote shutter; 2 sec at f/10, ISO 100.**

2nd Place $200 Prize

CHRIS HITCHCOCK, 52, PHOTOGRAPHER, CAPE TOWN, SOUTH AFRICA "For the Jailbreak Triathalon on the Western Cape of South Africa, getting to the location required a 3-mile run with a 26-pound camera bag. Temperatures hit 95 degrees with no wind. When I reached my spot, I kneeled in the middle of the road, athletes coming at me from both directions—on a blind corner. You only get one chance at the shot, and it lasts a split second. I wirelessly fired the Speedlite from a Gorillapod, pointing up at (South African triathlete) Claire Horner's face." **TECH INFO: Canon EOS 5D with 15mm f/2.8 Sigma EX DG fisheye and Canon Speedlite 430 EXII; 1/2000 sec at f/6.3, ISO 200. High-speed flash sync with PocketWizard FlexTT5. Minor adjustments in Adobe Lightroom 3.**

creative freedom without compromise

Gemini

Gemini 500C two-head studio flash lighting system

Gear of the Year 2011

WINNER
Pulsar TX
Best Studio Equipment

Part Code: BW4955US

The Gemini 500C kit contains:
2 x Gemini 500C monoblocs
1 x Pulsar TX Radio Trigger
1 x Pulsar Plug-in Radio Module
1 x 120° Wide Angle Reflector
1 x 90cm Silver/White Umbrella
1 x 60x80cm Softbox
1 x Rolling Kit Case

AC/DC compatible

wire-free technology

Gemini

Gemini 400 two-head studio flash lighting system

Part Code: BW4717US

The Gemini 400 kit contains:
2 x Gemini 400 monoblocs
2 x 120° Wide Angle Reflector
2 x 90cm Silver/White Umbrella
1 x Kit Holdall

AC/DC compatible

For a full list of Bowens dealers in the USA visit the website:

www.bowensusa.com @litebookmag

BOWENS
the power behind the picture

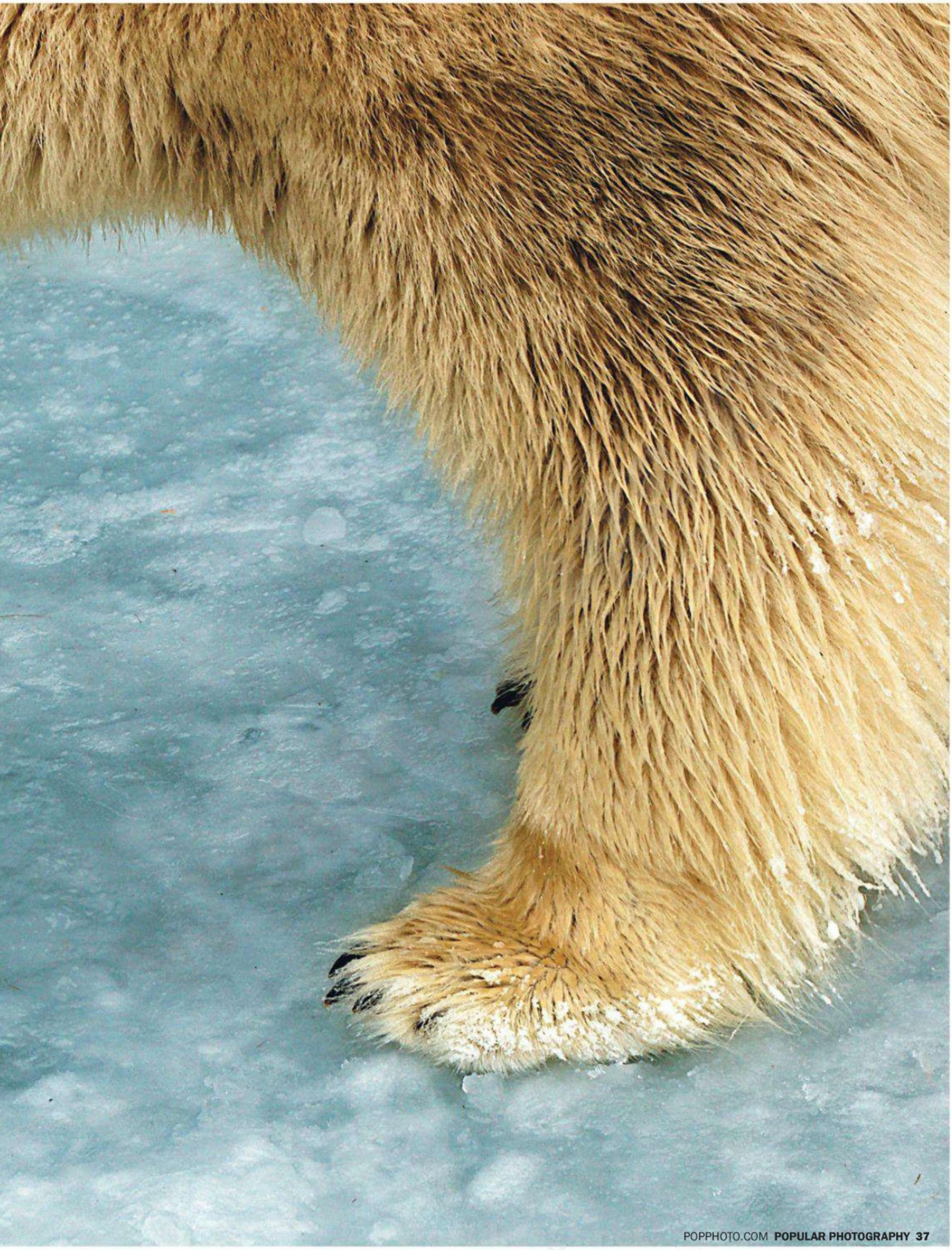
'Bowens'® and 'the power behind the picture'® are registered trademarks of Bowens International Ltd.
All models and technical specifications featured here are subject to change and without notice.
© 2012 Bowens International Ltd. January and February Special Kit Offers only valid until 29th February 2012.
Price shown does not include shipping or any applicable state sales tax. Offer only available from participating retailers.

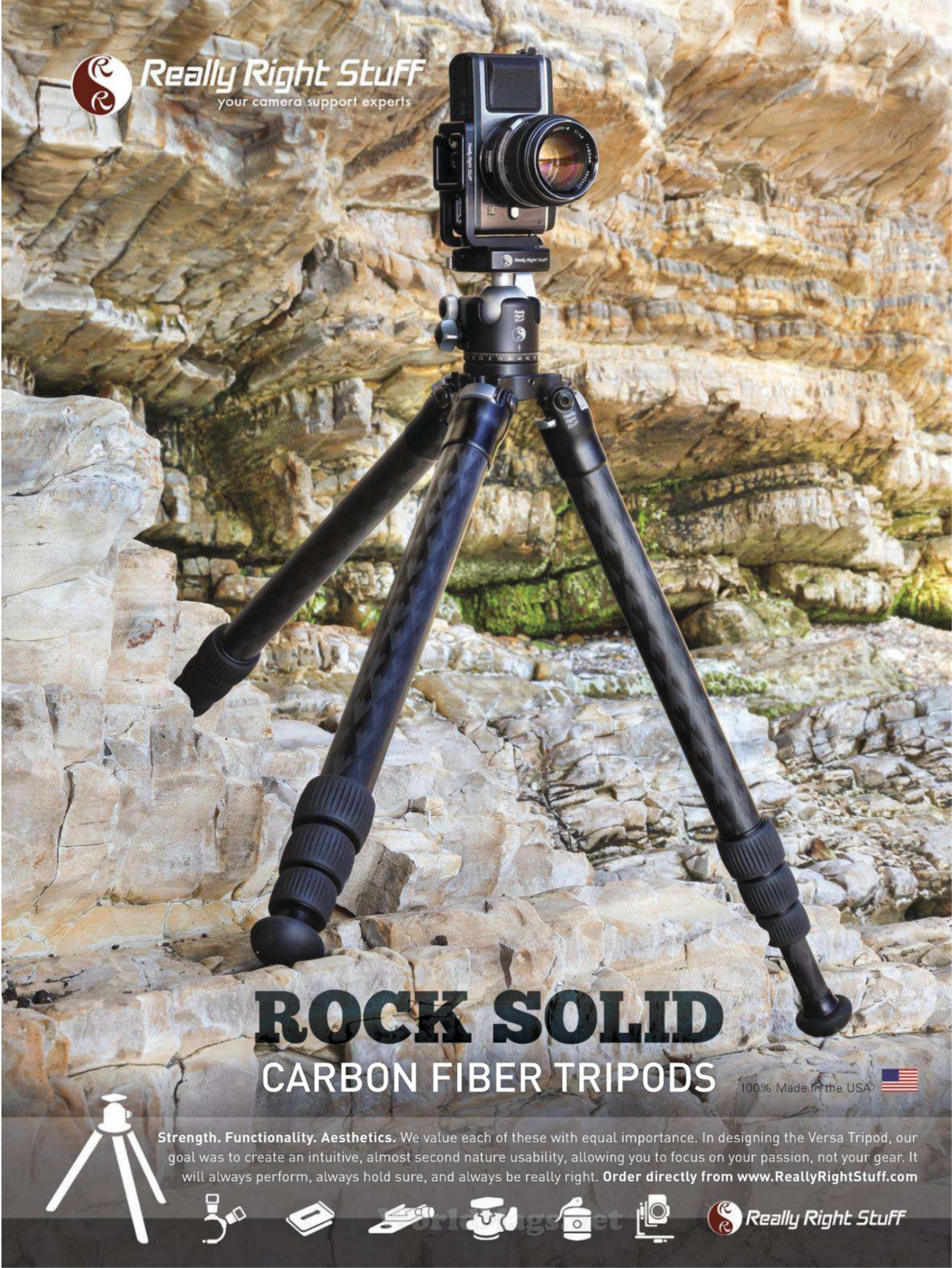
WorldMags.net

1st Place
$300 Prize

JOHN KNIGHT, 67, RETIRED COMPUTER SYSTEMS ANALYST, RICHMOND HILL, ONTARIO "I approached the polar bear pool at the Toronto Zoo to find Nikita playing with a plastic box. Though her toy was much too large to fit through a hole in the ice, she took turns trying hopelessly to force it through from above and below. Her sister, Aurora, offered her a kiss in consolation, but Nikita took offense."

TECH INFO: Sony Alpha 850 with 70–400mm f/4–5.6G Sony lens at 160mm; 1/160 sec at f/9, ISO 250. Minor adjustments in Apple Aperture 3.




Really Right Stuff
your camera support experts
ROCK SOLID
CARBON FIBER TRIPODS
100% Made in the USA
Strength. Functionality. Aesthetics. We value each of these with equal importance. In designing the Versa Tripod, our goal was to create an intuitive, almost second nature usability, allowing you to focus on your passion, not your gear. It will always perform, always hold sure, and always be really right. Order directly from www.ReallyRightStuff.com
Really Right Stuff

HOW

EXPERT TIPS AND TECHNIQUES FOR BETTER PHOTOS

CHANGE YOUR PERSPECTIVE AND OFFER A FRESH TAKE ON A SUBJECT

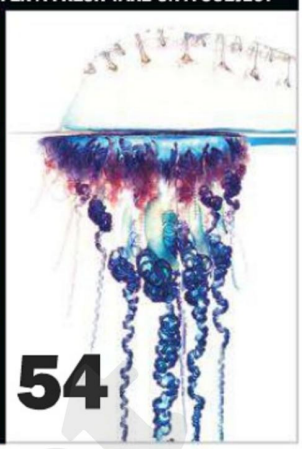
42

SHOOT WASHINGTON IN THE PINK

44

MAKE THE MOST OF FOUND LIGHT

48



54

CREATIVE THINKING

DANCE ART

Capturing bodies in motion

BILL WADMAN

SOMETIMES WE forget that photography doesn't have to capture a single decisive moment. Sometimes it can be more: a glimpse outside our usual sensory boundaries that reveals something both familiar and alien.

New York City-based photographer Bill Wadman (billwadman.com) was inspired by motion blur in an old boxing photo to try something lyrical with several friends who happened to be professional dancers.

He worked with eight dancers over a few months. They loved the idea of creating images that would speak to the grace and fluidity of their movement, because the traditionally posed photos in their posters and dance programs tend to look rather static.

What everyone discovered during this project, however, was that dancing to produce motion-blur photographs is "a little unnatural," Wadman says. "For dancers accustomed to moving,

WorldMags.net

it's counterintuitive to see that the more they move, the less the movement appears in a still image."

The approach he settled on was to define a three-dimensional "box" in the studio and ask each of the dancers to fill it. They had to imagine that they were filling the entire frame with their movement across a single exposure.

In this case, the exposure was 3.2 seconds long, at f/10 and ISO 200. The concept gave each dancer basic parameters to work within. "Like jazz musicians—you give them the chords and they'll improvise with them," says Wadman.

Using a Canon EOS 5D Mark II and 35mm f/1.4L Canon EF lens tethered to a laptop running Adobe Lightroom, Wadman could communicate with the dancers about their improvisations. After a shot, he would turn the laptop around to show his subject the picture. Then, the dancer would repeat the combination, stressing movements that worked.

But this method didn't succeed, because replicating moves with slight changes often produced a completely different image. "The project developed in an iterative fashion," Wadman says, "but it was definitely an exercise in randomness."

The image shown here was one of only two shots that made the final cut after a typical 130-shot session—and it is actually a composite of two expsosures.

"When I first started, I thought I'd get pictures that were kinetic, but recognizable as people dancing," Wadman says. "But I ended up with something that was much more graphic and abstract."

—Laurence Chen

FIX IT FAST

Whiteout

Blank highlights can work

ONE THING we liked about Lukas Gogis's duck on a dock was the neat top-to-bottom mirror symmetry. But the photo's tonality and corner vignetting diminish what is essentially a graphic design. So we decided to emphasize the graphic elements by transforming the highlight areas into a near-blank canvas.

We brought the photographer's original RAW NEF file into Adobe Camera Raw (ACR), adding exposure and fill light to reveal more detail—and to get the duck and dock to pop out of the background. ACR's Lens Correction tool automatically removed the corner vignetting and tamed some of the distortion. We also used noise reduction to reduce the grain, and added sharpening to the slightly fuzzy duck.

Next we cropped in Adobe Photoshop CS5, emphasizing the vertical dynamic. This places the design elements in the lower right quadrant and makes for more negative space at the top of the frame.

Total time fixing: 15 minutes.

—Dan Richards and Debbie Grossman

LUKAS GOGIS

Gogis used a Nikon D90 and 18–200mm f/3.5–5.6G AF-S Nikkor VR II; 1/2000 sec at f/5.6, ISO 1000.

DID YOU KNOW?

FILE TYPES: PSD VS. LAYERED TIFF

IT MAY BE ARCANE, but a debate rages among software aficionados: When saving a layered file in Adobe Photoshop, is it better to save as a PSD or a TIFF? We asked Photoshop's senior product manager, Bryan O'Neil Hughes, for his thoughts. His answer? PSD—most of the time. If you create a layered file and save your layers, you want your file to open in a program that can reveal and make use of those layers. Saving as a PSD ensures that a double-click on the file not only calls Photoshop to open it, but ensures an accurate preview. Double-clicking a layered TIFF could open any number of programs, depending on your operating system, and many of these may not use layers. PSD files can also be useful because they can contain more information, such as PDF annotations.

WorldMags.net

The new Sunpak ultra-thin video lights.

Videomaker 2012 Best of CES!

This light.

Even, natural light and color for video and stills is here!

The slim Sunpak LED 42 video light, and even more compact 9 and 12 LED versions, bring you incredible ultra-thin, lightweight design with super-bright LEDs using patented light column technology. And you'll have better images whether shooting wide-format video or standard-width still photos, all without harsh shadows or burned-out highlights.

Only one-inch deep, the LED 42 provides plenty of clean, color-correct light, so your still images and videos have rich color, clarity and contrast.

Leave old-technology bulky, heavy LED lights or harsh flash behind. Pick up one of the new Sunpak LED video lights today!

This thin . . .

Actual untouched image taken with a Canon XTi DSLR camera with the Sunpak LED 42 @ 1/25 sec., f5.6, ISO 800, @ 8 feet

This good!

Available at:

B&H · Wolf Camera & Image · Kits Camera & Image · Ritz Camera & Image · Camera & Image · Camera & Image · Adorama More than a camera store · Creve Coeur Camera

SUNPAK®
sunpak.com

All product names shown are trademarked by their respective holders.

WorldMags.net

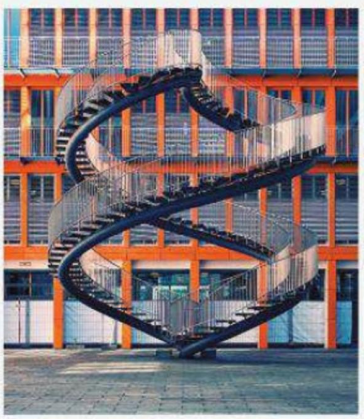
SPIN CITY

Getting close is only half the story

ONE OF photography's most honored axioms states: If your picture stinks, get closer. And while this makes for a trusty guide for improving a shot, getting close is only half the story. Getting low and tilting the camera up can take your shots somewhere pretty awesome, too. We've rarely seen these corollaries proven more forcefully than in this picture pair by German architecture fan Philipp Klinger.

Klinger, from Frankfurt am Main, was exploring this sculpture by Olafur Eliasson situated in a Munich office complex. You see the photographer's first attempt below. A fairly straightforward shot, made with the camera at eye level from about 75 feet with a 50mm lens, the picture is a clean rendering of the artwork, but it doesn't do the Möbius-like staircase justice. For that, Klinger had to switch lenses, move within 3 feet, get low and aim up. Result? The unapologetically trippy interpretation you see above.

For the above shot, Klinger set his 12–24mm f/4.5–5.6 Sigma zoom at its widest; below, he used a Sigma 50mm f/1.4. Both were on a Nikon D700.



PHILIPP KLINGER (2); DAN BRACAGLIA (CAMERA)

What's This?

Creative Control Mode

▶ **What it is:** This relatively new icon, found on the command dials of compact cameras such as the Panasonic Lumix FZ150 and Leica V-Lux 3, lets you preview and set special imaging effects.

▶ **When to use it:** When you want to apply an "arty" effect to your image from the start, rather than after you shoot. Creative Control filters let you quickly preview and select imaging effects such as muted color, super-saturated color, high-key, or sepia toning.

▶ **What's unusual about it:** These filters offer more advanced options (adjustable tilt/shift-style miniaturization, simulated HDR images) than they used to. With their own icon on the command dial, they are now at your fingertips.

WorldMags.net

GREAT WEB HOSTING
THE BEST VALUE
SERIOUS BUSINESS

Superior Website Availability with 1&1 Dual Hosting
Your website is simultaneously hosted in 2 locations in our geo-redundant data centers!

Unlimited Access
65 Click & Build Applications.

1&1 BUSINESS PACKAGE

- **UNLIMITED** Web Space
- **UNLIMITED** Traffic
- **UNLIMITED** E-mail Accounts
- **UNLIMITED** MySQL 5 Databases (1 GB each)
- **UNLIMITED 24/7** Support
- **FREE DOMAIN** with Private Domain Registration

~~$9.99~~ per month

50% OFF*

YOUR PRIVACY IS IMPORTANT. WE AGREE.

That's why at 1&1, all domains come with FREE Private Domain Registration to protect your name, address, phone number and e-mail from spammers and identity thieves.

MEMBER OF united internet

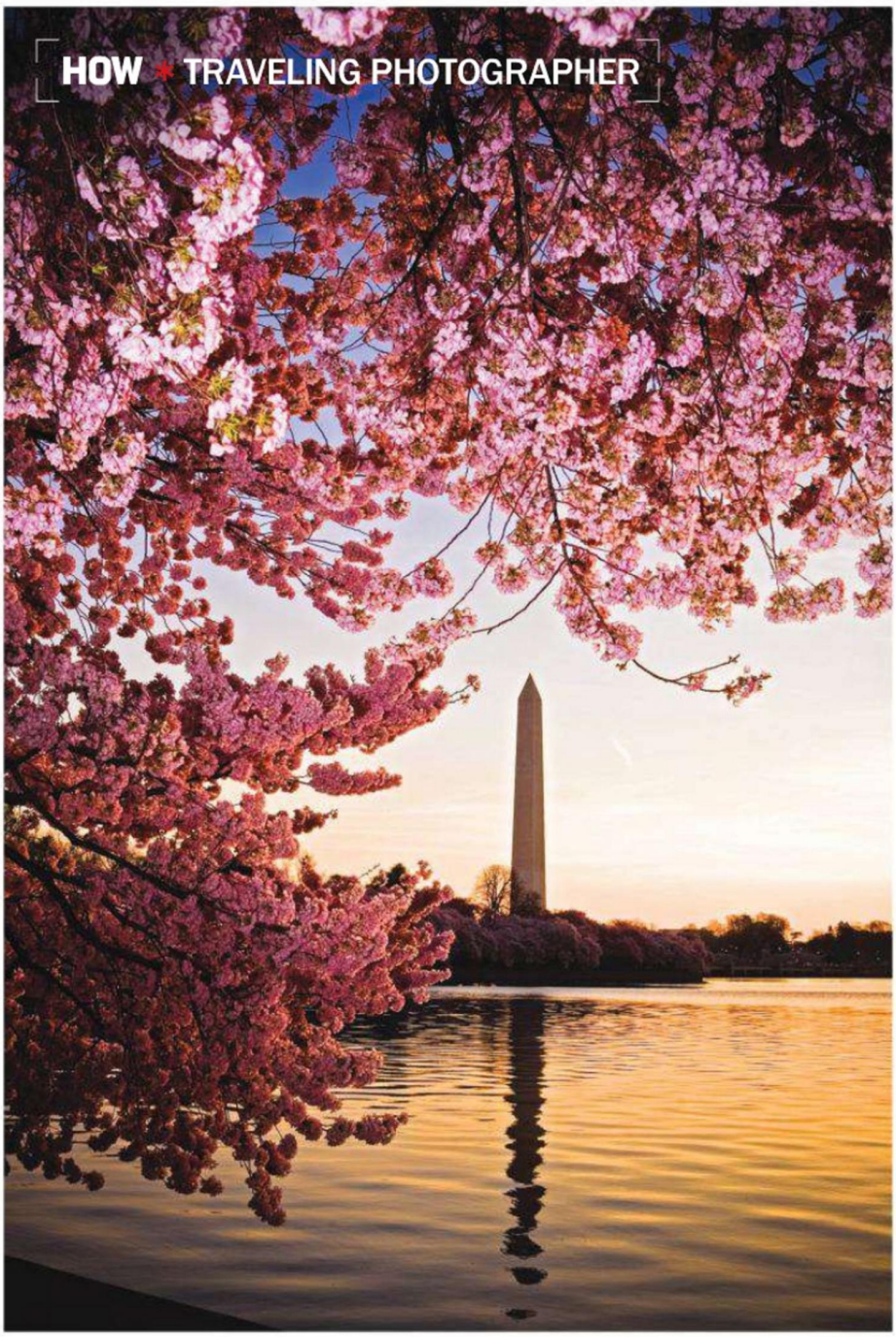
1-877-461-2631 www.1and1.com

1-855-221-2631 www.1and1.ca

1&1®

* 12 month minimum contract applies. Visit www.1and1.com for billing information and full Promotional offer details.
Private domain registration is available for .com, .net, .org, .info, .biz, .tv, .mobi, .name, .ws, and .cc domains. Program and pricing specifications and availability subject to change without notice. 1&1 and the 1&1 logo are trademarks of 1&1 Internet, all other trademarks are the property of their respective owners. © 2012 1&1 Internet. All rights reserved.

WorldMags.net



RANDY SANTOS, DCSTOCKPHOTOS.COM

In the Pink

A 100-year-old gift to scenic photographers

NO TIME of year beckons photographers to Washington D.C. quite as much as the spring—if only for the cherry blossom displays. From late March through the middle of April, the East and West Potomac Parks, Washington Monument grounds, and streets of Georgetown are packed with blooming displays that transform the city and create beautiful frames around its historic monuments. This year marks the centennial of the arrival of these trees from Tokyo, providing a perfect opportunity to capture an iconic image of our nation's capitol.

Timing for light and avoiding crowds is key, area pro Randy Santos (dcstockphotos.com) explains. The long-time commercial shooter has made a speciality of scenes like this one (at left).

"Tidal Basin in West Potomac Park is one of the most beautiful but well-known locations, which makes it important to head out pre-dawn," Santos explains. "You avoid the crowd and get amazing sunrise lighting, and also accessible street parking." (Check the local news for potential street closings due to Cherry Blossom Festival activities on the day of your visit.)

An early start also allows you to make your way through the city for other perfect shots (see sidebar). "Bloom peaks near the Capitol building tend to happen after those in Tidal Basin, so check the national park websites when you arrive," Santos says.

Bring an accessory flash for fill light and use a tripod at dawn and dusk.

And if you run into rainshowers? Scout out blossoms spotted by droplets of water—but keep your gear dry.

—Lori Fredrickson

WHERE TO GO

A SPRING THING

SINCE THE TREES WERE FIRST PLANTED ALONG THE BANKS OF THE POTOMAC IN MARCH 1912, YOSHINO AND KWANZAN CHERRY BLOSSOMS (AND OTHERS) HAVE ATTRACTED PHOTOGRAPHERS EACH SPRING. THE BEST VANTAGE POINTS INCLUDE:

- **CAPITOL HILL** Great for afternoon shots of blossoms on the grounds, particularly the eastern side (facing the Supreme Court) and the nearby National Arboretum. Tripods require a permit at the Capitol.
- **GEORGETOWN** Dumbarton Oaks Park (doaks.org) is an often-overlooked gem of cherry blossom photo ops.
- **THE TIDAL BASIN** The most iconic vista, with vantage points of the Jefferson Memorial and Washington Monument. Arrive early morning; for parking on the west side, Santos suggests entering on Ohio Drive and parking near the FDR memorial. For head-on shots of Jefferson Memorial, visit the eastern side.
- **WASHINGTON MONUMENT** Arrive in the morning or afternoon to shoot the grove of cherry blossoms. Shoot upward toward the monument, as close as possible.

WorldMags.net

Promotion

MENTOR SERIES™
Worldwide Photo Treks

CAPTURE THE WORLD

ALONGSIDE NIKON PROFESSIONAL PHOTOGRAPHERS

Images (left to right): Shane Shaw, Layne Kennedy, Sascha Burkard

HANDS-ON LEARNING · EXCLUSIVE PHOTO OPS · DIGITAL REVIEW SESSIONS

UPCOMING LOCATIONS INCLUDE:

Dubai • Maryland • Oregon • Nova Scotia • Iceland • Chicago • Montana

ANNOUNCING NIKON AS THE PREMIER 2012-2013 SPONSOR

REGISTER ONLINE AT WWW.MENTORSERIES.COM

For more information, call toll-free at 888-676-6468.

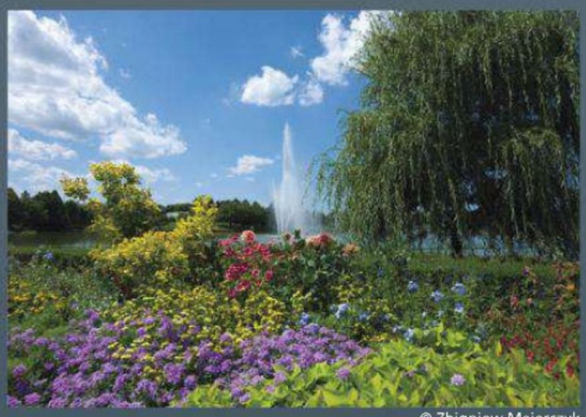
Nikon®

At the heart of the image

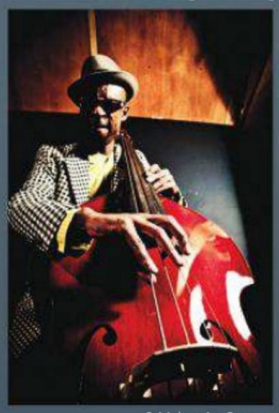
Chicago

August 10–12, 2012

© Songquan Deng



© Zbigniew Majerczyk



© Valentin Casarsa

© Ellen Moran

© Frans Dekkers

© Songquan Deng

REGISTER AT WWW.MENTORSERIES.COM

For more information, call toll-free 888-676-6468.

WorldMags.net

MENTOR SERIES
Worldwide Photo Treks

FOLLOW US ON
Mentor Series Worldwide Treks

Join the Mentor Series as we venture to Chicago, a thriving metropolis perched on the shores of magnificent Lake Michigan and the powerful Chicago River. Summer is a fantastic time to capture the astonishing architecture, park landscapes and cultural melting pot of the Windy City from every angle—whether you are pointing your lens up from a riverboat or shooting a bird's-eye view from atop a jutting skyscraper, this urban playground for photographers will not disappoint. Trek alongside Nikon professional photographers Reed Hoffmann and Michael Clark to pick up the ultimate tips and techniques that will help you create timeless photos that best represent this Midwestern city's diverse offerings.

Head out to the water on a riverboat and take all-encompassing panoramic photos of stately buildings hugging the shore. Capture city life and summertime on Lake Michigan, which clearly plays a vital role in Chicago's culture, history and daily life.

Back on land frame up environmental portraits of local blues musicians, using your mentors' helpful advice and the urban streets as the perfect backdrop. Board a private double-decker bus and consider the direction of the light as the mentors help you find a new way to see the famous landmarks. Pass the Sears Tower and the Art Institute, as well as the many public art installations such as The Four Seasons mural by Marc Chagall and a Picasso masterpiece.

At Millennium Park photographic opportunities abound with several unique sights, including the reflective Cloud Gate sculpture (affectionately dubbed "The Bean" by residents), the engaging Crown Fountain or the serpentine BP Pedestrian Bridge, to name just a few. Don't miss Buckingham Fountain in Grant Park as it lights up to photographic splendor, accompanied with music and beautifully animated with choreography of colored spotlights.

© Christopher Arndt

Enjoy private access and early morning light from the 94th floor of the John Hancock Center Observatory Deck. Take ample time to frame your shot as the sun crests the skyline over the sprawling city below.

Historic Navy Pier is a must-see landmark for anyone hoping to capture the essence of Chicago. Document a mixture of the old and new—from the popular boardwalk, Ferris wheel and carousel, which have charmed citizens for nearly a century, to the modern day festivals, which take place regularly along the Pier. Focus next on the historic Tall Ships and shoot a dramatic schooner against the summer sky.

Experiencing one of America's greatest cities through your viewfinder is guaranteed to expand your knowledge and renew your excitement for photography. This once-in-a-lifetime opportunity to learn from the pros will be the best inspired decision you make. Sign up today!

SCHEDULED TO APPEAR
Limited to 20 Students per Instructor

MICHAEL CLARK
National Geographic
Sports Illustrated

REED HOFFMANN
USA Today
Associated Press

Workshop Fee: $1,125*

* Includes in-the-field instruction, entrance fees, presentations, digital reviews, and transportation to each shooting location.

Special thanks to our premier sponsor:

Come to Chicago and try out some of the latest equipment that *Nikon* offers including their high-performance digital SLRs, NIKKOR lenses, the Nikon 1 System and a variety of COOLPIX compact digital cameras.

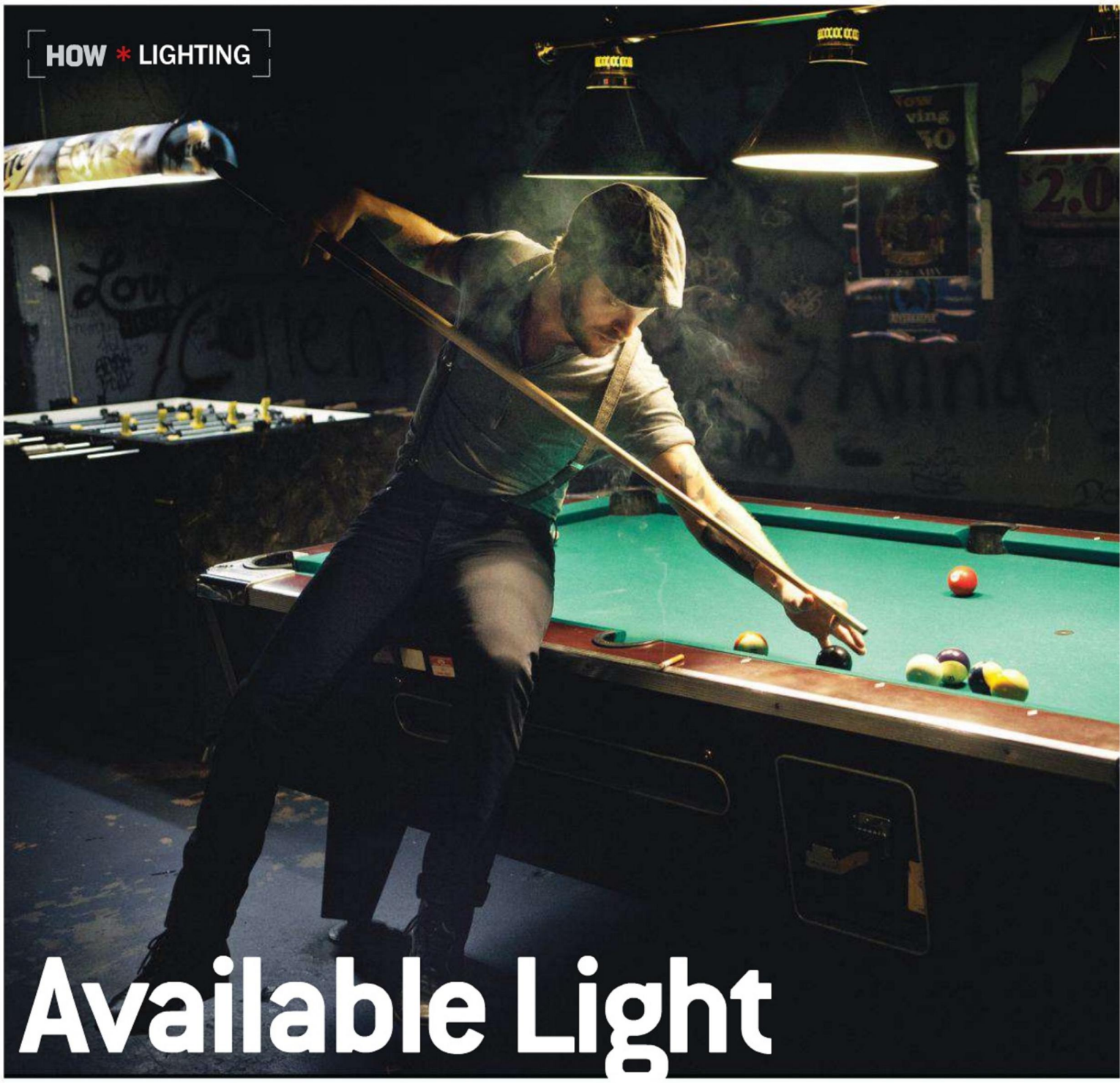
At the heart of the image™ Nikon®

With additional support from:

Manfrotto Imagine More

SanDisk

WorldMags.net



Available Light

When less is definitely more

"I ENJOY finding good light, instead of making it," says Alabama-based pro Cary Norton. And most of us would agree.

The available-light strategy makes a lot of sense for many photographers for several reasons: Good light is usually easy to find, it comes in all varieties (flat, contrasty, bright, or dim), and, when you're lucky enough to find it, costs nothing.

It sure worked for Norton's portrait of rocker Matthew Mayfield, shown here. He took it during a daylong photo shoot in which he and Mayfield explored colorful locations in and around Birmingham, AL, including this local dive bar and its dramatically lit billiards table.

Cary Norton's editorial and fine-art photography is suffused with an edgy realism. For more, visit carynorton.com.

Norton could have rolled in with a dolly full of strobes, snoots, and umbrellas. But the bar's own lighting had the right atmosphere to complement Mayfield's music—anything more would have ruined the ambience.

As Norton puts it, "shooting straightforward suits Matthew's style. The goal was to capture a gritty feeling, and adding lights would have undermined that."

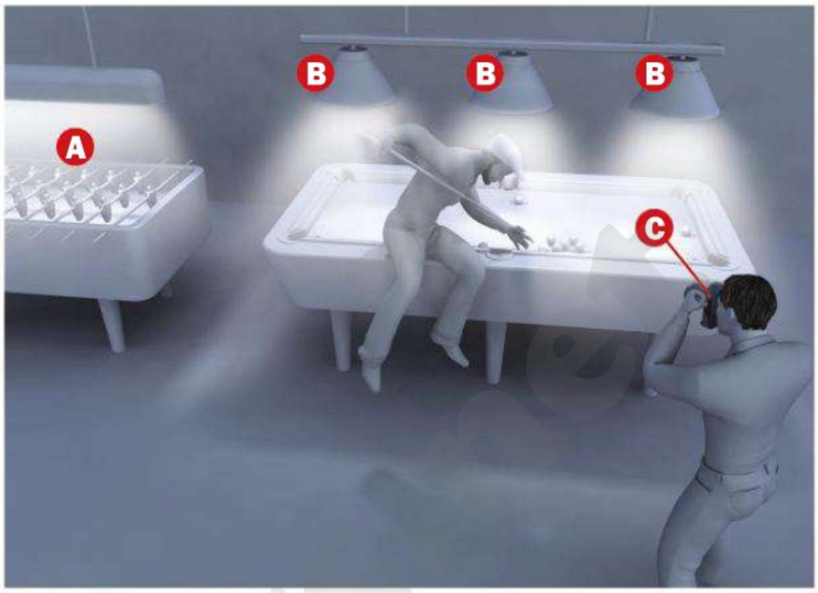
CARY NORTON (PORTRAIT); SCANRAIL/FOTOLIA.COM (BULB); DMITRY KOLMAKOV/FOTOLIA.COM (TUBE)

WorldMags.net

Norton shot Matthew Mayfield with a Canon EOS 5D Mark II and 24–70mm f/2.8L Canon EF lens at 1/50 sec at f/2.8, ISO 1600.

RELYING ON AMBIENT LIGHT

SIMPLE ■■■■■■■■■■ COMPLEX



KRIS HOLLAND/MAFIC STUDIOS (ILLUSTRATION)

To lend his rock-singer subject Mathew Mayfield some Southern street cred, photographer Cary Norton brought the musician to a gritty Birmingham, AL, dive bar and eschewed adding his own lighting. Instead, he went with two available light sources: a fluorescent bank in the background (A) and three overhead incandescent bulbs in shades (B). The photographer handheld his Canon EOS 5D Mark II (C), and was able to capture sharp images, in part, because of the high ISO he set. He used image-editing software after the shoot to balance the conflicting color temperatures of the two different light sources.

COMMON COLOR TEMPERATURES

TUNGSTEN (about 2700 K)
Common in halogen and traditional household incandescent bulbs, this light is relatively amber in color.

FLUORESCENT (3200–5500 K)
Many fluorescent bulbs today emit whiter light closer to daylight; the older greenish type has become harder to find.

DAYLIGHT (about 5600 K)
The neutral white hue common in midday sunlight is imitated by electronic flash.

Of course, working with available light can be just as difficult as setting up your own—you will need to develop an eye for it. Many photographers would have walked right by this pool table, unaware that between the overhead fixtures and the table top—invisible against background shadows—three cones of potentially dramatic light waited to be exploited. (Norton saw the potential in these cones when Mayfield lit a cigarette and the smoke gave them shape.)

While shooting, Norton hit another common trap: conflicting color temperatures. The lights over the foreground pool table were tungsten incandescents, while those behind his subject were fluorescent tubes. He synched the two sources by first setting the capture white balance on his camera to 3200K, rendering the pool table lights near-white. Later, in Adobe Photoshop CS5, he used layers and layer masks to alter the color balance of the fluorescent-lit areas until they also appeared white.

"I like working with ambient light," says Norton. "I tend to shoot from the hip and I like finding new ways to use different available light sources—it always turns into something rewarding."

—Peter Kolonia

WorldMags.net

Touch to Edit

The world's biggest imaging application goes mobile

ADOBE PHOTOSHOP TOUCH, the tablet version of Photoshop that launched late last year for Android devices (and just became available for the iPad) is no replacement for the Photoshop on your computer. But it packs surprising power—supporting layers, levels, and curves—and even makes use of layer blend modes.

DEBBIE GROSSMAN

Our original shot (top left) came in flat, so we added contrast (top right), then tried some effects (bottom row).

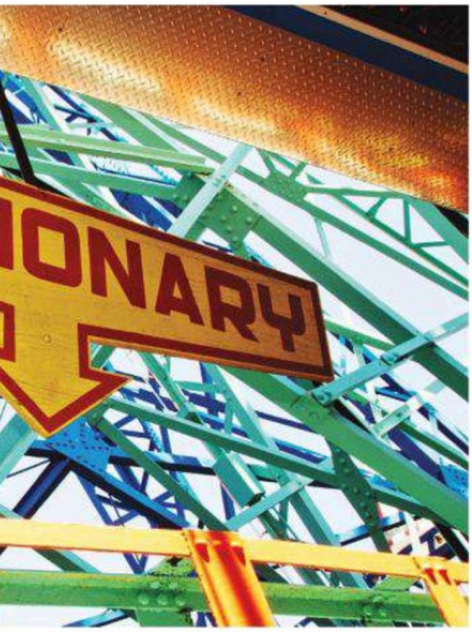
For now, images are limited to maximum pixel dimensions of 1600x1600. So what's this app good for? Some creative pros are using it as a way of making quick mockups on the go—a photo sketchbook of sorts. For enthusiasts, it's a way to add the kinds of photo effects that are popular right now, but on a more sophisticated level.

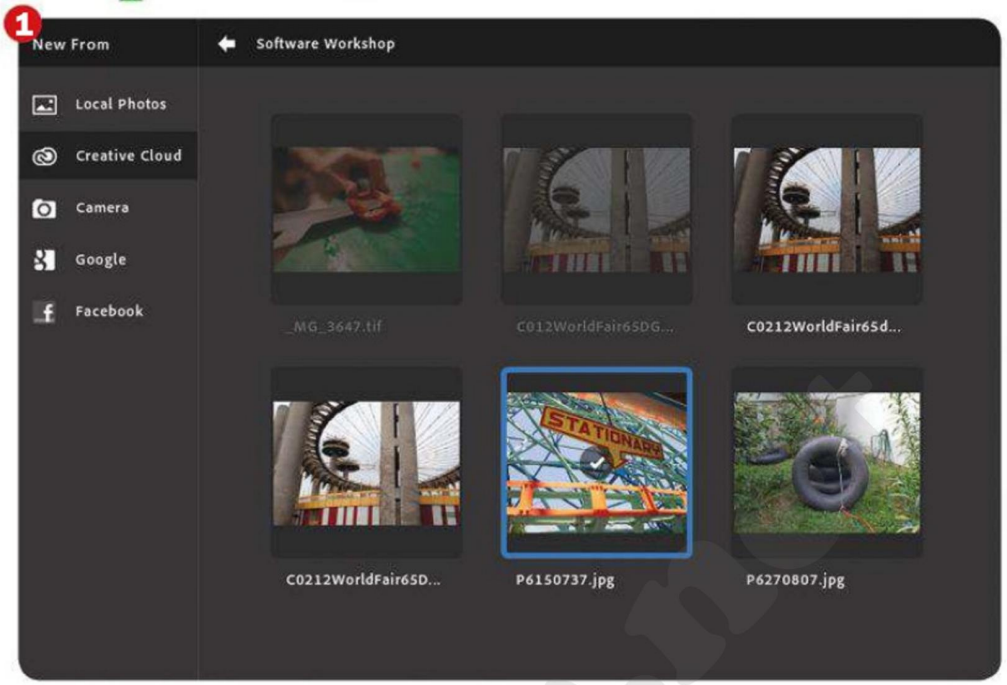
The interface takes some getting used to, particularly if you are well-versed in the computer-based version of Photoshop. Tools in the toolbar appear and disappear, and menu items are represented by new icons.

Here's a brief look at what Photoshop Touch can do, from importing to adding effects

WorldMags.net

SIMPLE COMPLEX





Step 1

Start by bringing in an image. Because this is an Internet-connected tablet, image import works differently than it does on a computer. **From the home screen, tap the Add Image icon.** You can add a photo that's on your device, shoot a new one with the tablet's camera, grab one using a Google search, pull one from Facebook, or choose one that you've uploaded to Adobe's Creative Cloud service. Tap your file, and then tap Add to begin editing.

Step 2

As in Photoshop, the toolbar is on the left, layers live on the right, and commands and adjustment menus run across the top of the screen. Start by adjusting curves. Since the app offers no adjustment layers (for now, Photoshop Touch provides no method for nondestructive editing), click the plus sign in the layers panel, and choose Duplicate Layer from the menu of options. **Then tap the Adjustments menu and choose Curves.** Adjust the curve by tapping to add points and dragging the points up or down. Click Apply when you have finished.

Tap the Adjustments menu (inset, above) to choose from an array of tools. Thumbnails provide a preview of each tool's function.

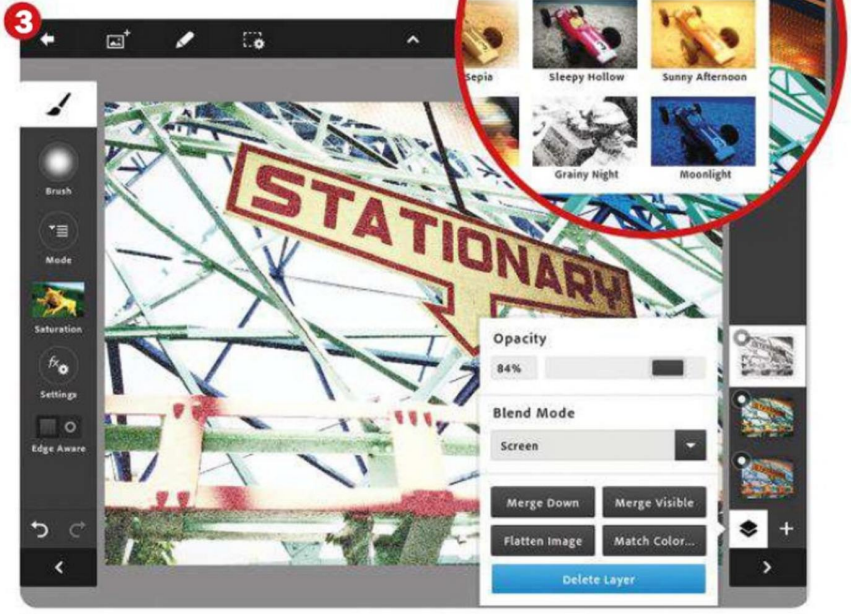
and sharing. Even if you never try the app, it's an interesting glimpse into the future of image manipulation. As tablets get more powerful and high-speed Internet connections more common, we expect that full-scale image editing will soon be possible on portable, touchscreen devices.

—Debbie Grossman

WorldMags.net

Step 3

Now add some effects. **With your curves-adjusted layer selected, tap the Effects menu and choose Photo > Sleepy Hollow, then pick your intensity and tap apply.** Adding a single effect is good, but the power of Photoshop Touch is in the layers. So tap the plus icon to duplicate the layer, and add the Grainy Night effect. Adjust the amount of grain and brightness, then tap Apply. Finally, blend the top layer with the one below by tapping on the layer adjustments icon and switching the blend mode to Screen.



The Effects menu (inset) provides several ways to change your image's look. You can add as many layers as you like and adjust them individually.

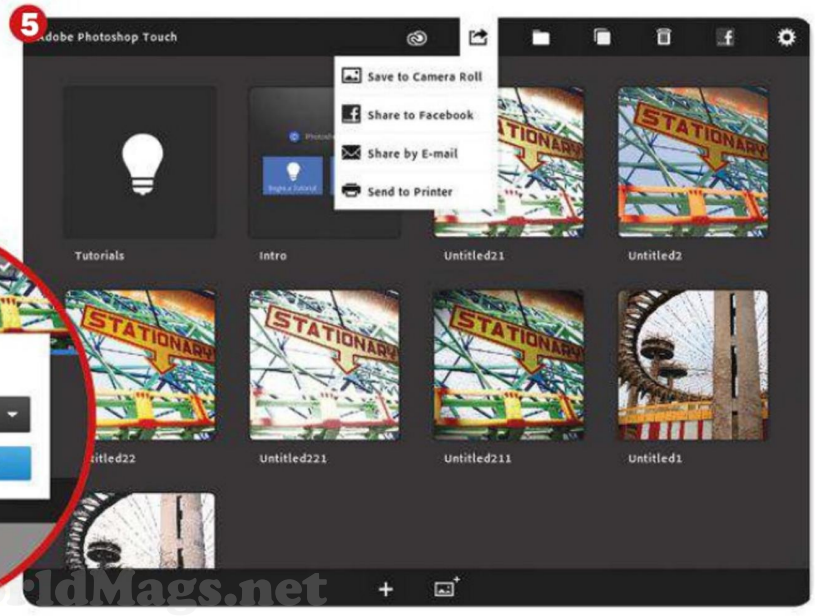
Step 4

Want to give your picture a different style? Scrap the top layer. To do so, tap the layer options icon and choose Delete Layer. Then tap the plus, and tap again to add an Empty Layer. **Choose Effects > Artistic > Scratches to create scratches on the blank layer.** Adjust for the look you want, then tap Apply. Add a vignette by creating another empty layer, then going to the & menu and choosing Add Gradient. Adjust its effect on the layer below by changing its blend mode and opacity.

Add scratches (inset, above).

Step 5

Photoshop Touch isn't just about effects—you can make quick selections and swap out backgrounds, replace a color with an alternative one, or make elaborate composites. **When you create a project that you like, hit the output icon to choose your method of sharing.** You can send your picture to Facebook, share by email, print, or save it to your device for export using any other app that can access your photos.

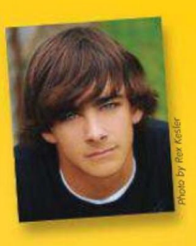


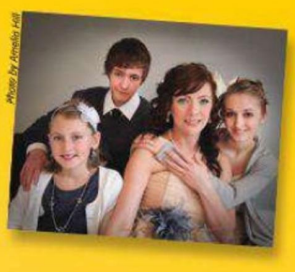
Save your final image to your tablet as a JPEG or PNG file (below).

WorldMags.net

A LIST OF PRODUCTS AS LONG AS YOUR ARM. PRICES THAT WON'T COST YOU ONE.

Lab Corrected
8x10
FOR ONLY
$1.49





Lab Corrected
11x14
FOR ONLY
$3.99

GREAT PRINTS. GREAT PRICES. EASY ORDERING. IT'S THAT SIMPLE.

meridian
Professional Imaging

www.meridianpro.com | 800-544-1370

MERIDIANPRO.COM
WorldMags.net

PAUL MARCELLINI

WorldMags.net

Field Kit

Give wildlife the Avedon treatment

MIAMI PRO Paul Marcellini is no stranger to this magazine. Readers may remember his high-impact black-and-white wildlife featured here last fall. What you may not know is that Marcellini (www.paulmarcellini.com) is a contributor to an international nature portrait project called "Meet Your Neighbours."

Using the talent of accomplished nature photographers from all over the world, the project (meetyourneighbours.net) presents commonplace—and usually backyard—wildlife and botany in rather uncommon portraits reminiscent of Richard Avedon. Marcellini's project covers much of southern Florida, and has contributed amazing images of numerous plants, insects, snakes, alligators, turtles, and even undersea creatures—all cleanly posed against bright white backgrounds.

For the Portuguese man-of-war shown here, Marcellini started by building a customized aquatic tank to hold and photograph such creatures. Made from panes of acrylic, three of its sides are white translucent panels through which he can pop shoe-mount flash units, essentially turning the tank into a water-filled softbox. He shoots the subject through the clear front pane.

If building your own fish tank seems daunting, buy an aquarium from any pet shop—a 5-gallon version should do—and line three of its sides with a white translucent material.

When the shooting starts, you will need an additional transparent acrylic or glass pane, freestanding within the tank. This will help you nudge your subject closer to the front. The reason: To give you as little water as possible between the front panel and the subject, assuring a sharply rendered specimen. As long as it is clear and scratch-free, this moveable pane will disappear when your flash units fire.

Another must? Clear water. "In the field, this can be tough to find," says Marcellini. "I usually use a white T-shirt, doubled over, as a particulate filter when pouring seawater into the tank."

In the field is exactly where this photograph was taken. Marcellini shot on Key Biscayne, an island just southeast of Miami. He netted the man-of-war on the beach where it had recently washed up. Then he carefully avoided its stinging tentacles, photographed it, and immediately returned it safely to the Atlantic Ocean.

No men-of-war near you? No problem. Marcellini uses the technique described here for all types of aquatic and semi-aquatic creatures such as small fish, frogs, and salamanders.

—Peter Kolonia

To photograph his Portuguese man-of-war, Marcellini used a Canon EOS 5D Mark II (A), Tamron 180mm f/3.5 macro lens (B), and two Canon Speedlites, including the 430EX II (C).

Step 1

Gather your gear. In addition to the tank, you will need a macro lens that puts ample distance between you and your subject. If too close, your rig will throw a shadow across the subject.

Step 2

Set up the tank. On location, fill the tank with local water, filtering it through a white T-shirt folded in two. Catch your subject and carefully introduce it into the tank. Let it accustom itself to its new surroundings while you continue setting up.

Step 3

Place your lights. You will need at least two accessory flash units on light stands: one placed immediately behind the tank and the other in front. Fire them wirelessly, if possible.

Step 4

Work out the exposure. Set your shutter to its maximum flash sync speed, use a low ISO, a small aperture for depth of field, and start with the flash units at full power. Find the rear flash exposure by lowering its power until it just barely blows out the translucent white background. Do the same for the front light: Lower its power until it lights the subject, without blowing out color or subject detail.

Final Step

Shoot the photo. Keep your camera parallel to the front glass to prevent distorted proportions. When you've finished, return your subject safely to the wild.

WorldMags.net

APPALACHIAN SPRING

Text and photos by Ian Plant

What's America's most scenic drive? Many would say it's the silver ribbon of highway that connects Shenandoah National Park, the Blue Ridge Parkway, and Great Smoky Mountains National Park—places that come alive with wildlife and wildflowers every spring. The bloom begins in late April, so it's not too soon to start planning your photo holiday in the southern Appalachians.

WorldMags.net

CLINGMANS DOME
GREAT SMOKY MOUNTAINS NATIONAL PARK, TN/NC
Above the clouds at sunset, Ian Plant made this shot with a tripod-steadied Canon EOS 5D Mark II and 500mm f/4L IS Canon EF lens, 1/250 sec at f/8, ISO 100.

WorldMags.net

WorldMags.net

ONE OF THE BEST spring blooms on the planet brightens the southern Appalachian mountains in late April, May, and early June, and the highway connecting the national parks here gives photographers easy access to some of the most scenic areas in the eastern United States.

Typically, the spring bloom doesn't start until the last two weeks of April or the first week of May. Trillium, dogwood, and azalea (and many other species) all blossom in profusion. Near the end of May and beginning of June, the rhododendron bloom begins.

Early June is also a great time to see baby wildlife, including white-tailed fawns and black bear cubs. Of course, seasonal variations occur year by year, and the considerable elevation differences mean that while spring is in full swing at one location, it may be a week or two off just a few miles away.

Here's what to expect at the region's three premier parklands.

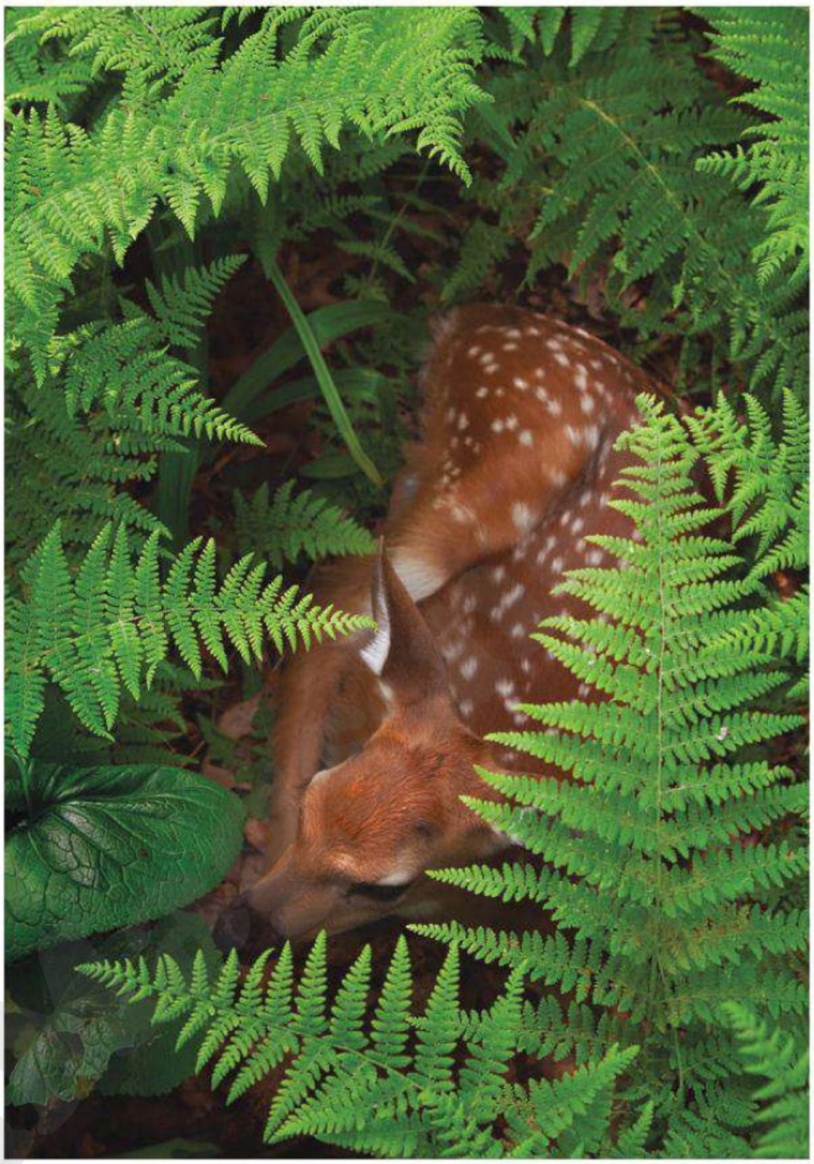
Shenandoah

Located in northwestern Virginia, Shenandoah National Park is known for its abundant wildlife, cascading waterfalls, and rocky mountaintops. Spring tends to start in the high mountains of Shenandoah a bit later than locations further south—early May is usually a good bet. The views from the 105-mile long Skyline Drive include plenty of mountains, the scenic and historic Shenandoah Valley to the west, and the rolling Piedmont to the east.

You can't go wrong with any of the dozens of overlooks—many face east for sunrise, and others west for sunset. Two of my favorites at dawn are Hazel Mountain Overlook (milepost 33) and Loft Mountain Overlook (milepost 74.5); Crescent Rock Overlook (milepost 44) gives you easy access to scenic cliffs for sunset.

WHITEOAK CANYON FALLS
SHENANDOAH NATIONAL PARK, VA
Plant used a polarizer on his adapted 14–24mm f/2.8G AF-S Zoom Nikkor to reduce glare on the wet rocks. A tripod-mounted 5D Mark II captured the 1-sec exposure at f/11, ISO 100.

FAWN NEAR BIG MEADOWS
SHENANDOAH NATIONAL PARK, VA
Does often hide their fawns in woodland ferns, sometimes even right off the trail. Plant handheld his 5D Mark II with 24–105mm f/4L IS Canon EF lens for this shot, taken at 1/60 sec at f/8, ISO 1600.



But for the best that Shenandoah has to offer, take a hike. Two of the best trails, Whiteoak Canyon and Old Rag Mountain, are extremely strenuous—attempt them only if you're in good shape. The Whiteoak passes dozens of waterfalls and cascades swollen with spring rains. Old Rag takes hikers through a twisted maze of giant boulders, chasms, and overhanging caves before reaching epic views on the summit.

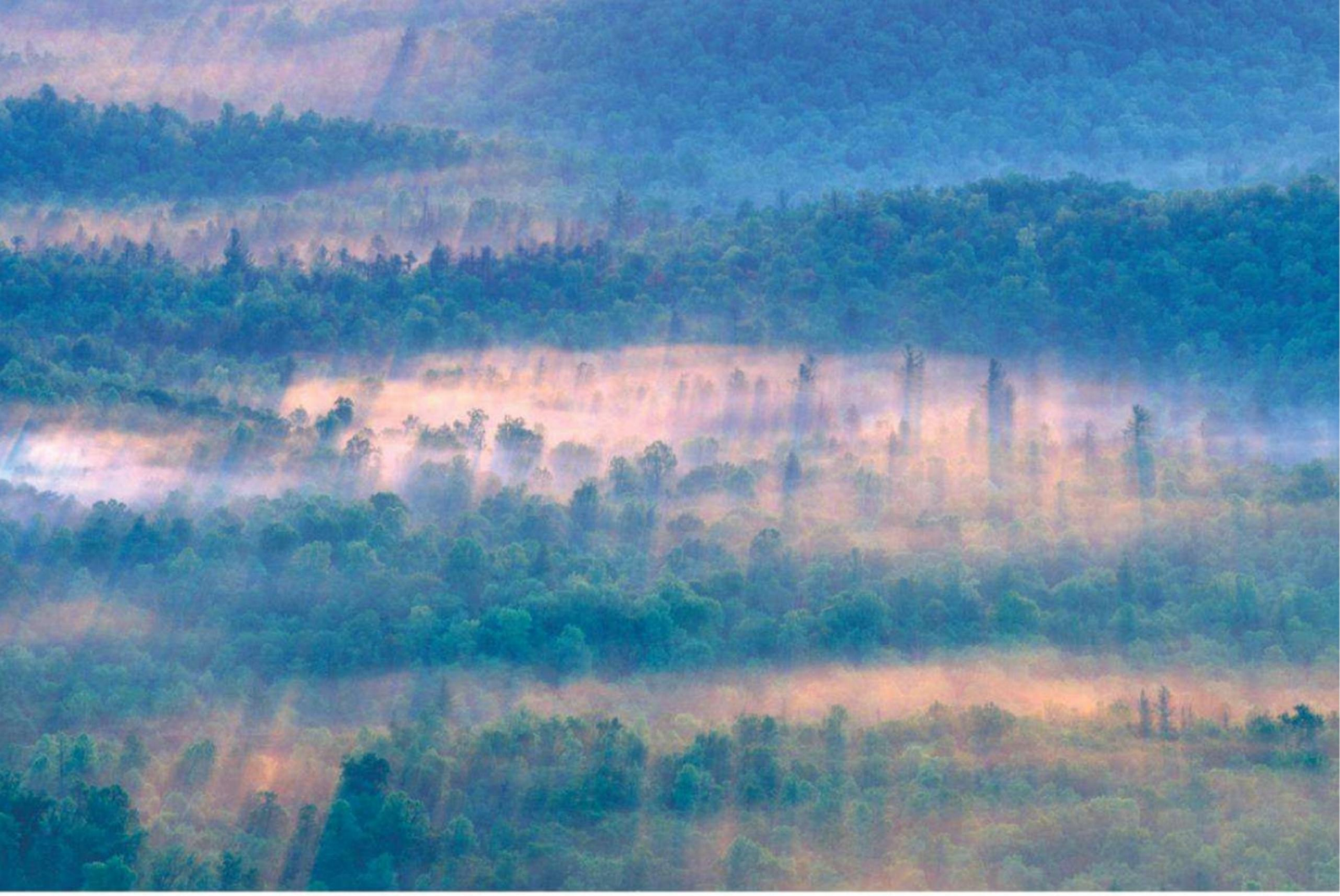
Less adventurous? Try Big Meadows, a large open area that attracts wildlife—including deer and black bear—and take the short hike to nearby Dark Hollow Falls (the return is quite steep). A moderate hike to Blackrock Summit (milepost 84.8) puts you atop the remnants of an old collapsed cliff with great panoramic views perfect for sunrise or sunset.

Blue Ridge Parkway

This 469-mile road starts at the southern end of the Skyline Drive and winds through the rolling hills and mountains of Virginia and North Carolina. Late April brings dogwood and trillium to lower elevations—spring typically reaches higher areas in early May.

There's no shortage of photo ops along the way. (I recommend photographer Nye Simmons's excellent guidebook, *Best of the Blue Ridge Parkway*, to learn more.) In Virginia, be sure to stop at Peaks of Otter (milepost 86) for reflection views of Sharp Top in

WorldMags.net



FIRST LIGHT
BLUE RIDGE PARKWAY, NC
A scattering of mist picked up the golden glow of dawn. Plant used a K.B. Canham DLC45 view camera with a 300mm f/9.0 Nikkor M lens to make the image on Fujichrome Velvia film (ISO 50); exposure data not recorded.

Abbott Lake, and at Mabry Mill (milepost 177) for a beautiful historic site. If you want to hike, Humpback Rocks (milepost 6) provides exceptional views, and Fallingwater Cascades (milepost 83) offers scenic waterfalls.

A few side trips lead to sensational areas to shoot, including Crabtree Falls (exit at milepost 27, taking VA 56 east for several miles to reach the trailhead below the falls) and Rock Castle Gorge (exit at Tuggle Gap, milepost 165.2, and take VA 8 for 3.2 miles to CCC Camp Lane/SR 605), which blooms with a profusion of wildflowers in spring. Both destinations require hiking to get into the most scenic areas; the Crabtree Falls hike is more strenuous.

Farther south, incredible photo ops abound in the high mountain sections of the parkway in North Carolina. Plentiful overlooks yield stunning, classic scenes. For instance, Price Lake (milepost 296.7) offers spring trees reflected in a mountain lake. You'll find the famous Linn Cove Viaduct, a curving bridge that hugs the side of the mountains, at milepost 304. And Craggy Gardens (milepost 364.4) affords magnificent views, especially in early June during the rhododendron bloom.

Two of the best spots perch in the mountains south of Asheville: Pounding Mill Overlook (milepost 413) has great views of Looking Glass Rock, a prominent rocky knoll, while Cowee Mountains Overlook (milepost 430.7) delivers an endless succession of ridges stacked one on top of another.

Want some off-road adventure? At Rough Ridge (milepost 302.8) a boardwalk takes you through a high mountain heath ecosystem. Trails at Linville Falls (milepost 316.5) lead to several vantage points above this thundering cascade. And while Crabtree Falls (milepost 339) has the same name as the set in Virginia, it offers a much different look.

You can photograph the stunning Graveyard Fields (milepost 418.8) from the overlook or explore the scenic waterfalls on foot. Sarvis trees typically bloom here during the first week of May, dotting the hillsides with white.

Just off the Parkway, several sites demand visits. Grandfather Mountain Preserve (at milepost 305, take US 221 a mile south) is a beautiful, privately owned UNESCO International Biosphere Preserve with trails, wildlife, and scenic views. At milepost 355.4, take the Mount Mitchell State Park spur road for high-elevation views. And at milepost 412, take US 276 toward Brevard—nine miles later you'll reach stunning Looking Glass Falls on the left.

CONTINUES ON PAGE 106

WorldMags.net

INTERFIT

Expanding your Creativity

Super cool-Lite 6

Fluorescent flicker free Daylight Balanced

Each head equivalent to 750watts of Tungsten power

Easy to set up thanks to a new simple design

Item No : INT213 Single head Super Cool-lite 6 MRSP - $215.99
Kit No : INT214 Super Cool-lite 6 twin head Kit with stands MRSP - $529.99
Replacement Lamp : INT042 (32 watt)

Seculine LED Light

High-Power HD Light Source
Dimming and fan control function
Changeable light module

Tungsten / Daylight
Wireless control
(option)

Seculine
LED Light

- *Digital dimming*
- *LCD display*
- *One touch changeable light module*
- *1/4inch screw mount*
- *Remote control(option)*

Three Versions available

L2S3K LED unit
with Tungsten Module $429.00

L2S5K LED unit
with Daylight Module $429.00

L2S3K5K LED unit
with Tungsten & Daylight Module
$613.00

Interfit Photographic Ltd
420 Industrial court West
Villa Rica,GA 30180
Tel :(toll Free) 1-866-947-9796

Want to know more about the Super Cool-lite range? Log on to

www.interfitphotographic.com

WorldMags.net

Tech Trends

By Philip Ryan

WHAT'S IN STORE? HIGHER-RESOLUTION IMAGES, SMALLER AND SMARTER GEAR, AND INSTANTANEOUS WIRELESS IMAGE TRANSFER.

WITH SO MANY new cameras and lenses launched recently, now is the best time to take a look at how the latest technology will likely play out in the coming year. We see three trends reshaping photography in the near future: Lenses evolving to accommodate the needs of video capture, sensors emerging in new sizes and designs, and Wi-Fi connectivity being built into more cameras.

Remaking the Lens

While the fundamental laws of optics will not change, there is a lot more to a camera lens than just the glass elements—especially with zooms. Both electronics and mechanics play a key role in performance. With the advent of contrast-based autofocus in interchangeable-lens compacts, lenses for these systems have developed more robust communications with camera bodies.

Plus, new designs, such as the Olympus 12–50mm f/3.5–6.3 EZ M.Zuiko Digital ED kit lens (shown here) for the OM-D line (page 11), let you switch between manual and electronically controlled zooming and AF. "You're able to uncouple the zoom motor from the mechanics that move the elements, and operate it manually," says Rich Pelkowski, an Olympus product manager for DSLRs, Pens, and the OM. "Then you can seamlessly switch back for three-speed electronic zooming that's great for movies. There's no more mechanical linkage with the body, so your imagination can run wild as to how you control the lens."

Take the button on the new 12–50mm lens that converts it to macro mode. While it won't afford life-sized 1:1 magnification, it's a great feature to include in a kit lens for users who might step up to an ILC from a true compact and miss the close-focusing capabilities of those small cameras.

With the new kit lens for the inaugural body of its new OM-D line of Micro Four Thirds cameras (right), Olympus has created a do-it-all 12–50mm (24–100mm equivalent) that lets you switch between electronic and manual zoom and focusing, and can operate as a macro lens with 1:1.33 reproduction. It even has weather sealing.

Samsung has put its lenses on a diet. "In our case," says Jay Kelbley, senior marketing manager, imaging division, "since it's a new lensmount and our optics are designed for APS-C from the ground up, we have an advantage in terms of weight, which translates to faster AF, and lenses can be sharper since they're designed to focus down to a smaller pixel pitch. Our 85mm f/1.4 is 40 percent lighter than anyone else's."

Such improvements don't come cheap. Mark Weir, Sony Digital Imaging's senior technology manager, notes, "Some of the materials, such as the rare earth that's used to make certain elements in the more advanced lenses, are going up in price significantly."

While we may not enjoy an era of falling prices, we will see smaller—if not lighter—lenses. Darin Pepple, senior product manager for imaging at Panasonic, says, "For us, the challenge is to make better use of aspheric lens elements. When you look at our 14–42mm X-series power zoom lens, it has four aspherical elements, compared to two in the standard version of that lens. Making the optics smaller and still making them sharp means using more aspherical elements."

Sally Smith Clemens, Olympus product manager, notes, "When we include our dual aspherical elements, which employ aspherical surfaces on both sides of a lens, we can reduce even more size and weight than when we use regular aspherical elements."

The next frontier: Video. Electronic control like that offered by the new Olympus lens translates into seamless and silent zooming handled through the camera, not mechanically on the lens barrel.

SATOSHI (LENS); OLYMPUS IMAGING (ILLUSTRATIONS)

WorldMags.net

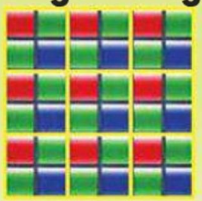
LENSES

Taking their cues from camcorders, lens makers have begun to add silent electronic zooms for video, while retaining the manual zoom controls stills shooters are used to. And lighter, smaller, more versatile optics are proliferating.

WorldMags.net

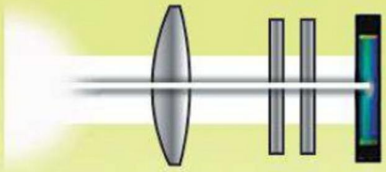
Fujifilm's X-Trans Sensor

Bayer Array

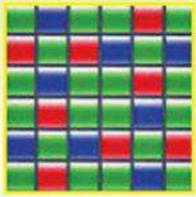


In a typical sensor, a repeating 2x2 pixel pattern generates color.

An optical low-pass filter in front of the sensor protects against aliasing and moiré effects, but also cuts resolution, according to Fujifilm.



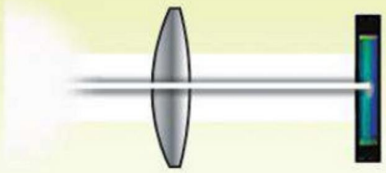
X-Trans Array



The new sensor uses a repeating 6x6 pixel pattern to generate color.

Since the X-Trans system doesn't use an optical low-pass filter, the company claims that resolution is preserved.

Fujifilm based its color filter array on the random placement of film grain.



SENSORS

New sensor designs and formats, as well as improvements in manufacturing, promise higher resolution and less noise, with little tradeoff in terms of cost.

You can expect to see such features move swiftly into lenses made for DSLRs. "Going forward there will definitely be more optimization for cinema," says Chuck Westfall, Canon's technical information advisor for professional engineering and solutions. "Personally, it seems that a lot of the things that people have come to take for granted in the camcorder world that haven't existed in SLRs will have to port over at some point."

Sensor Shake-Ups

Less noise, faster data readout, more resolving power. That's the buzz on next-generation sensors.

As usual, size matters. The larger the imaging sensor, the greater chance of a defect, driving up their cost to manufacture. But larger sensors can accommodate physically larger pixels that capture more light and typically produce less noise than their smaller counterparts. Those qualities make a huge difference to photographers.

Sensor makers' need to balance cost and quality has led to lots of experimentation and a burst of innovation. New models include the nearly APS-C-sized sensor in the Canon PowerShot G1 X (tested on page 77) and Fujifilm's X-Trans sensor with its unique color filter array in the new X-Pro 1 (illustrated above).

Fujifilm is trying to add resolution by scrapping the low-pass filter most digital cameras have in front of the sensor, where it works as an anti-aliasing filter to fight moiré effects. The X-Trans uses a color filter array that is said to mimic the grain in film, which forms a random pattern. Fujifilm believes this will cut moiré while eliminating a layer of glass for a sharper image.

In an effort to boost resolving power, Fujifilm designed its new X-Pro 1 camera body to have no low-pass filter in front of the sensor. Instead, it modified the color filter array to minimize moiré in images.

Fujifilm is not alone in removing the low-pass filter—Nikon's D800 can be purchased without one (see page 18). And new software has also begun to account for moiré: Both Adobe Lightroom 4 and Nikon Capture NX 2 will include a tool to reduce it.

Thanks to advances in manufacturing, better-performing sensors have begun to appear in more and more compacts—even point-and-shoots. "It's remarkable that backside-illuminated (BSI) sensors have found their way to the consumer market," says Eric Fossum, professor of engineering at Dartmouth's Thayer School of Engineering and the primary inventor of the CMOS sensors found in most of today's cameras.

"To make them, you have to sandwich a second wafer on top of a normally processed wafer, then grind the first wafer down to just a few microns thick and make it perfectly smooth. The chance of something going

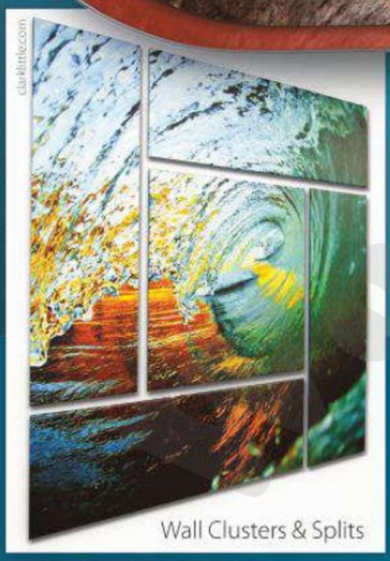
CONTINUES ON PAGE 114

WorldMags.net

MetalPrints

Image by A.K. Rowland

NEW! Creative Edge MetalPrints



Stunning Prints on Aluminum

With a Variety of Beautiful Mounting & Framing Options

Learn More at **www.bayphoto.com/metalprints**

25% OFF* Your First Bay ROES Order!

*For instructions on how to redeem this offer, fill out the New Customer Account Request form at www.bayphoto.com.

bayphoto.com

WE'RE HERE FOR YOU!

WorldMags.net

Your Camera's Hidden Talents

By Dan Richards

YOUR DSLR MAY BE EVEN SMARTER THAN YOU REALIZE. WE FOUND 12 LITTLE-KNOWN CAPABILITIES THAT WILL HELP YOU FULLY TAP INTO THE POWERHOUSE THAT RESIDES IN YOUR CAMERA BAG.

When a perfectly level horizon line is crucial to the success of your landscape, or you don't want to take your eye off the viewfinder, or you handhold your camera, a built-in electronic level rules. The leveling guide on the Nikon D3s, shown here, can be superimposed in live view.

YOUR DIGITAL SLR (even if it's a budget "entry-level" model) is a picture-making powerhouse. And sure, you know all about the still and video capture, burst shooting, tracking autofocus, and smart metering.

But your camera likely has additional capabilities you may not know about—features that can improve your photos and make for a more enjoyable shooting experience. You may be surprised at the clever elves lurking in your camera body.

Now for our standard weasel words: Not every camera will have all of these tricks onboard, and older models will have fewer of them than newer models. The best way to find out the deep capabilities of your camera is to read the instruction manual—*backwards*. Some of the most interesting stuff gets buried in appendixes or custom-function tables in the back of the book. Also read the manuals for any software included with your DSLR: Some features end up there instead of the camera manual. Happy hunting!

1 Keep the horizon horizontal with an in-camera leveling guide.

Even experienced landscape photographers occasionally find their horizons tilting in shots, especially when the actual horizon is uneven to begin with. Ditto for architectural shots. And while you can always straighten things out later in image editing, you will lose some of the frame edges when doing so. Enter the in-camera level, which has a great advantage over tripod and hot-shoe levels: You can see the indicator in the viewfinder, allowing you to compose and level simultaneously.

Some cameras also have a level for the pitch axis (up/down tilt). This proves useful for squaring the camera with buildings or other structures, thus avoid keystoning (also called toppling perspective).

TIP **We've found in-camera levels particularly useful for handheld shooting. Photographers take plenty of landscape and cityscape pictures without a tripod, after all, and these are the shots that most often end up tilted—particularly the verticals. The in-camera level lets you get it right with very little fuss.**

DAN BRACAGLIA

WorldMags.net

SALLEE SCHOOL LIVE

Don't get left in the dark room !

SPRING SEMESTER

SUMMER SCHOOL

LAB INSTRUCTOR/HOST

MINI SESSION I

MINI SESSION II

INTRODUCING

YOUR FIRST HALF 2012 INSTRUCTORS

CONTINUOUS - LOW COST - LIVE EDUCATION
IN A CITY NEAR YOU!

PHOENIX	MARCH 19
LOS ANGELES	MARCH 20
SAN FRANCISCO	MARCH 21
PORTLAND	MARCH 23
DENVER	MARCH 25
KANSAS CITY	MARCH 26
ST. LOUIS	MARCH 27
HOUSTON	MARCH 28
DALLAS	MARCH 30
MINNEAPOLIS	APRIL 1
CHICAGO	APRIL 2
COLUMBUS	APRIL 4
BOSTON	APRIL 5
NASHVILLE	APRIL 9
TAMPA	APRIL 10
ATLANTA	APRIL 12
NEWARK	APRIL 13
CHARLOTTE	APRIL 15
OKLAHOMA CITY	APRIL 16

ENROLL TODAY

BEFORE CLASSES FILL UP

ONLY

$49

WITH THIS CODE
(POPPHOTOAPRIL)
$99 AT THE DOOR

FIRST 50 TO ENROLL IN EACH CITY WILL RECEIVE $1000+ IN STUDENT COUPONS

www.salleeschool.com

WPPI · RANGEFINDER · radiopopper

ALBUM EPOCA · Kodak · MILLER'S · MARCO FINE ARTS · fotofafa · QUANTUM · songfreedom · Marathon · mpixpro · ANIMOTO FOR PHOTOGRAPHY · onOne Software

2 View your pictures remotely with tethered shooting.

Tethered shooting isn't limited to high-end DSLRs. You can use a computer (or TV) for playback with any DSLR that has a video-out terminal, which is virtually all of them. Playback on a big screen is a boon for studio portrait shooting or tabletop still-life work—any static situation where detail is critical.

Even better, many current DSLRs (most Canons and Nikons, and Sony Alpha 700, 850, and 900 models) allow true tethered shooting: You operate the camera using the computer, which displays a live view on the screen. (Software for this is bundled with Canons and Sonys; Nikon shooters need Nikon Camera Control Pro 2, $145, street. Or try Adobe Lightroom 3 or Apple Aperture 3; both have built-in tethering for Canon and Nikon.)

TIP With a long cable, you can use a tethered camera for wildlife shooting in your backyard.

PHOTO SUPPLIED BY TETHERTOOLS

3 Go from RAW to cooked with in-the-camera processing.

You don't need image-editing programs to process RAW files if you have one of the many DSLRs that allow RAW-to-JPEG conversion, with image editing, right in the camera. (Most current Canon, Nikon, Olympus, and Pentax models have this ability.) Before your conversion, you can make many standard image edits, such as white balance, highlight and shadow adjustment, saturation, contrast, cropping, JPEG profile, and so on.

Cameras increasingly allow for more elaborate fixes and modifications, too, such the miniature effect or perspective correction in shots of buildings. The great part is that the processing leaves the RAW file untouched, so you can make multiple versions of the same image.

TIP Want to travel light for a day or weekend trip? Leave the notebook computer at home and take some extra memory cards. Shoot in RAW, and convert your favorite shots during down time or while on the plane/train/bus.

4 Zap dust with software using dust mapping.

Yes, your sensor shakes to remove dust, and you carefully use a blower to loosen dust from the glass plate in front of the sensor, but you may still get persistent dust spots in your photos. Many cameras allow you to map the dust spots and rid your images of them later in software.

The mapping entails photographing a blank white surface; the manufacturer's image-editing file uses the data to fill in the dust spots by interpolation.

TIP Continue to exercise due diligence against dirt. Change lenses carefully, and never leave a camera body or rear lens element uncapped.

The tidy tethering setup above uses the TetherTools Tether Table Aero System (www.tethertools.com), which can be bundled with the shown Manfrotto 131DDB Accessory Arm and Manfrotto 496RC2 Compact Ball Head for mounting on a single tripod or other stand.

5 Perfect your optics with lens correction.

Readers of our lens tests know that there is no such thing as a perfect lens. Even top-notch optics can produce distortion, light falloff, and soft images at some apertures. A growing number of DSLRs have built-in fixes to correct for distortion (barrel and pincushion) and corner vignetting. Some can even counteract chromatic aberration, which robs images of sharpness and causes color fringing; in some cameras, this function is part of the RAW conversion menu.

Watch out: In some cases, this function works only with the camera maker's own lenses, not with independent optics.

TIP The lens correction option may be the default setting in some cameras. If so, you can turn it off in a setup menu. Why would you? The distortion correction can cut off some of the frame edge—or you may just want the distortion.

CONTINUES ON PAGE 112

WorldMags.net

Paul Fredrick

YOUR FIT. YOUR STYLE.®

Crisp, comfortable white 100% cotton pinpoint oxford dress shirts in **Regular, Big & Tall or Trim Fit** at a

SPECIAL INTRODUCTORY PRICE...

$19.95

Reg. $49.50-$54.50

Plus, FREE monogramming!
(a $9.75 value)

Add this Silk Stripe Tie for only $19.95!
Item #TMG1520
(Regularly $49.50)

More options than you'll find anywhere else!

Your Collar Style: Six Collar Choices.
Your Cuff: Button or French Cuff.
Your Fit: Regular, Big & Tall or Trim.
Your Size: 14½" x 32" to 20" x 37".

Specify promotional code **TXRSPH**

New customer offer. Limit four shirts per customer. Shipping charges extra. Cannot be combined with other offers. **Free exchanges.** Expires 4/30/12.

Order Today! Call **800-309-6000** or visit **paulfredrick.com/try**

ImageStore

Planning Portraits

For people pictures, success happens when you correctly size up a subject and apply an appropriate strategy. Of course, not all portrait approaches suit all subjects. Your challenge is to pick strategies that will work and avoid those that won't. We asked five portrait specialists to reveal their tactics. *By Peter Kolonia*

MANY DECISIONS go into shooting a single portrait. Often, as we chat with our subjects, we're not even aware that we're making choices about framing, subject distance and position, color palette, focal length, lighting, and other elements. But rather than rely on instinct alone, here are some ways to ensure you make the *right* decision.

Frame Them Up

More then any other tools at your disposal, composition and framing help you direct a viewer to appreciate something specfic about your subject. It could be a physical quality such as beauty, or a personal quality of character.

One crucial question: How tight should you frame a face? When Richard Brocken of the Netherlands (richardbrocken.com) made this portrait of his (then) 10-year-old daughter Eva, he wanted to focus attention on her beautiful eyes. Their gaze reflects a calm, Zen-like quality unusual in a child so young. So he moved in as close as possible with his Nikon D50 and 50mm f/1.8 Nikkor to capture a single eye and cheekbone.

"Because I've photographed my children all their lives, they're very used to it," says Brocken. He was able to move within 18 inches of the child, and she remained relaxed, composed, and unselfconscious.

"My first concern is always to focus on what's important in a portrait, and here it was that eye," he says.

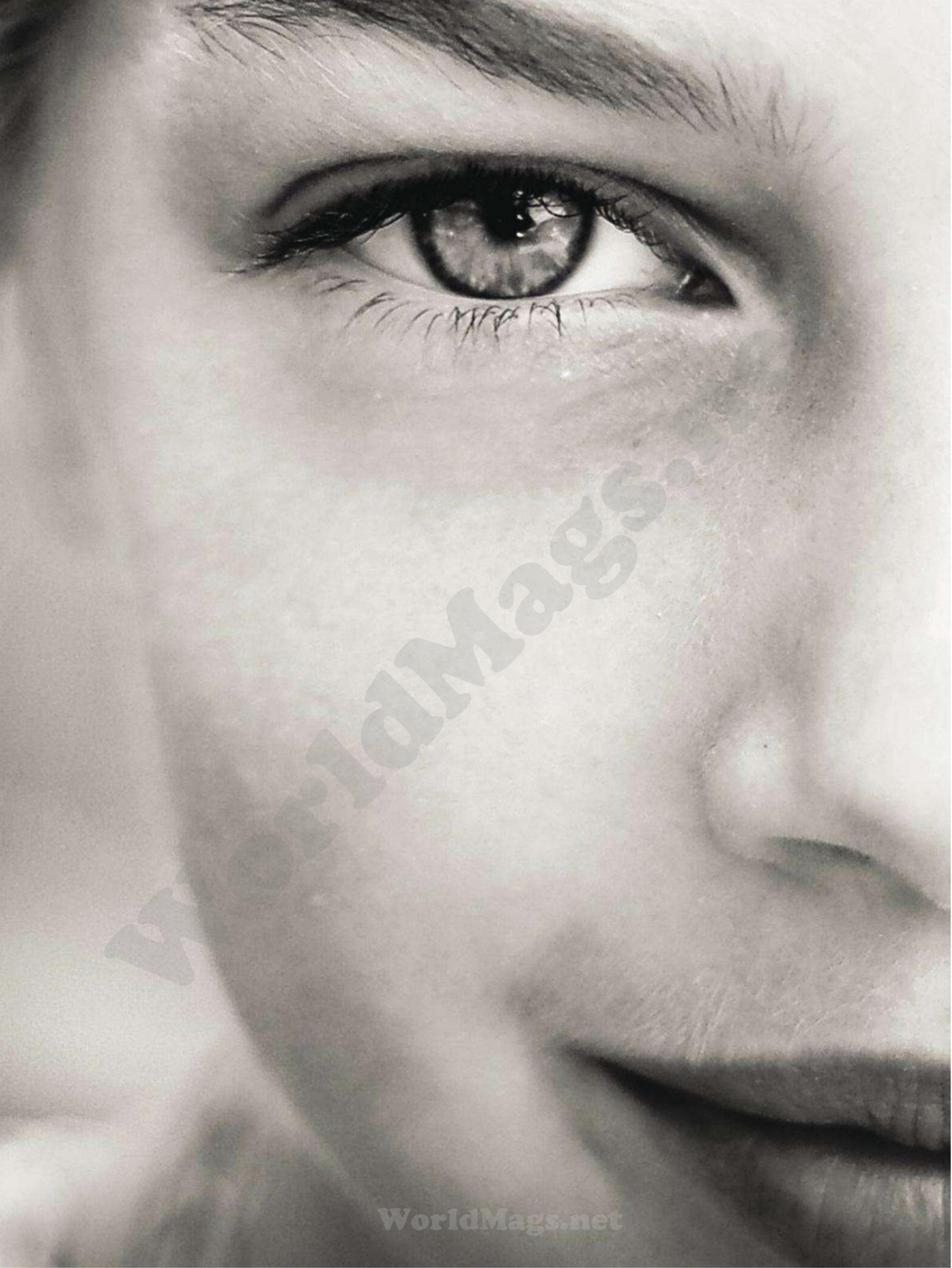
After some experimentation, he found that converting the image to black-and-white drew even more attention to this limpid window into the soul.

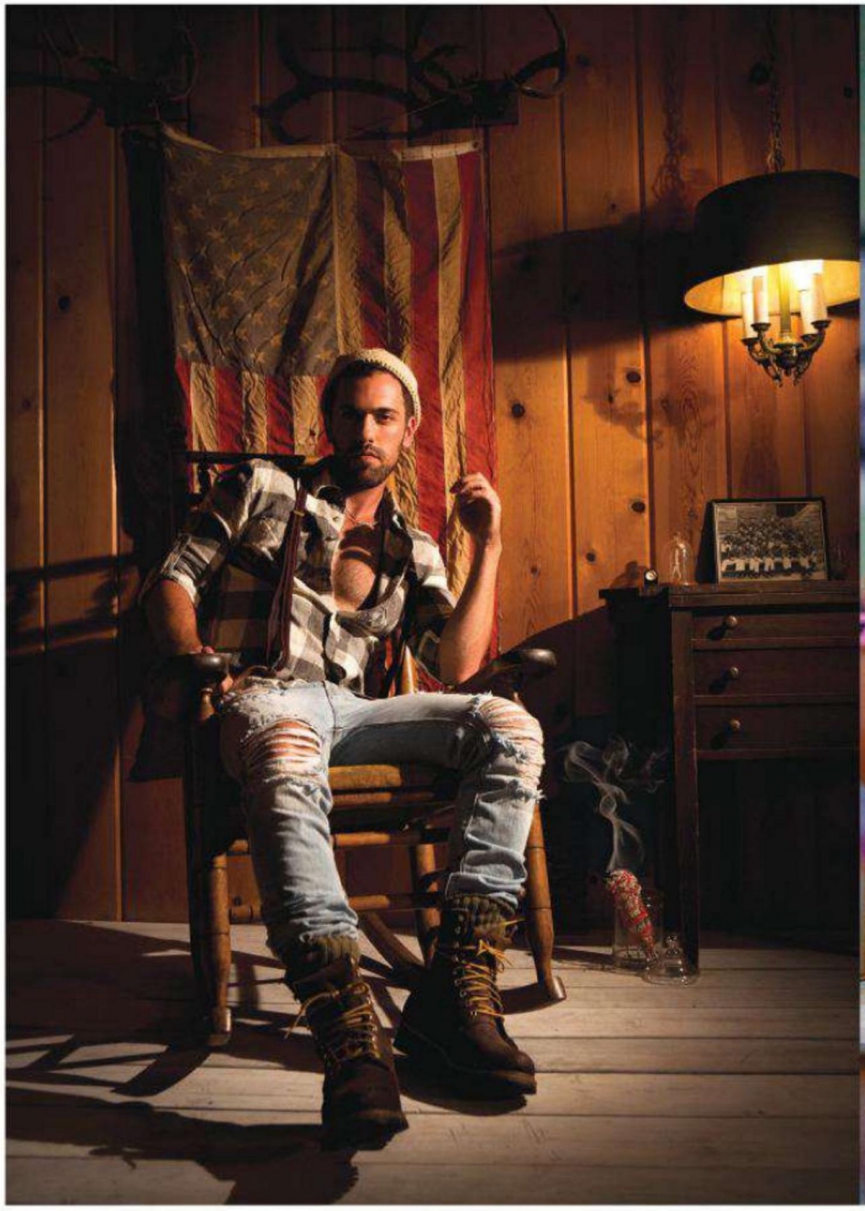
For subjects with whom you are not quite so intimate—or who feel less comfortable being photographed—you can use

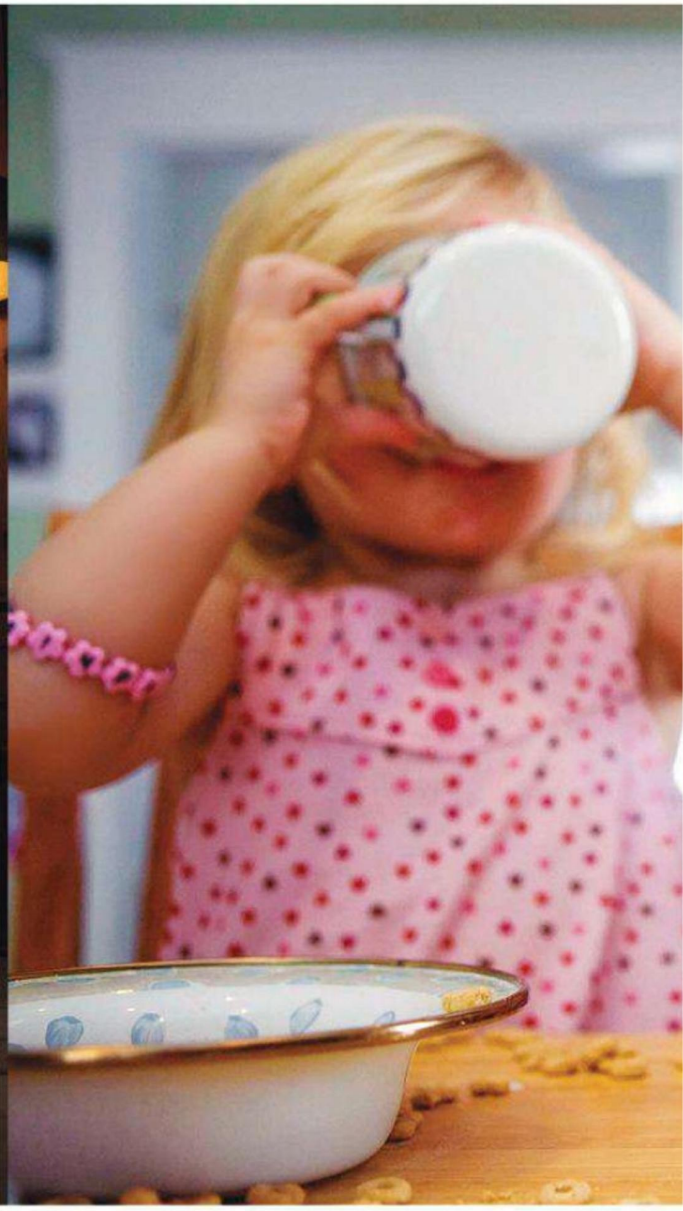
THE EYES HAVE IT. To draw attention to what he felt was important in this portrait, Richard Brocken came in extremely close to his daughter, Eva. He used a Nikon D50 with 50mm f/1.8D Nikkor; exposure, 1/640 sec at f/1.8, ISO 200.

RICHARD BROCKEN

WorldMags.net


WorldMags.net





CHRISTOPHER DIBBLE

a telephoto lens to let you stand farther away, though you may need to crop for the exact framing.

For a less intimate view, move back for a half- or full-length portrait. This shifts the attention from your subject's skin and facial expression, placing it onto the body, gesture, and background. (It also takes the pressure off your subject to appear fashion-magazine "perfect.")

If the background is cluttered or distracting, downplay it by cropping in on your subject, dimming the light in the background, or defocusing it by shooting at a larger aperture. If, however, the greater scene complements or somehow comments on your subject, include as much of it as possible.

Depict the Surroundings

Environmental portraits, in which the nature of the background is almost as important as your human subject, can make a portraitist's life easier.

Christopher Dibble, a Los Angeles-based photographer who made the male portrait shown here as part of a fashion spread (christopherdibble.com), specializes in finding simple yet evocative backgrounds for his pictures of actors and models.

"My eyes are constantly looking at locations and evaluating their potential as portrait backdrops," he says. "Whenever I see a background with possibility, I take a photo with my cellphone and e-mail it to myself with the location and time of day. I'm looking for interesting light and the ability to control any clutter or distractions. There must obviously be room to shoot someone in the space, and the scale and proportions of the human body have to make sense within the larger scene."

PRESERVE THE ENVIRONMENT. Let the background location do some of the expressive work. Christopher Dibble shot this man with a Canon EOS 5D and 24–70mm f/2.8L Canon EF zoom; 1/125 sec at f/5.6, ISO 320.

Once he finds a great background, Dibble uses his own lighting to bring out its character.

Light Your Way

Whether it's a set up you create or the ambient one you've found, lighting—and shadows—can lend

WorldMags.net

mood and presence to your subject, while drawing attention to (or deflecting it from) specific physical traits. The right light can make heavy people appear thinner, and carefully placed shadows can help conceal any number of perceived flaws that your subject may feel uncomfortable about.

"Don't be afraid of shadows," Dibble says. "I wanted to create some tension with the lighting in this cabin portrait, so I put an orange gel over the main light to create a warm glow, but I also made no attempt to fill in the shadows." Almost completely black, they impart a mysterious, almost uncomfortable or threatening feel to the portrait, giving it the compelling, edgy quality that Dibble likes.

PLAN YOUR CANDIDS. **Barbara Peacock posed these sisters in front of a colorful background and coaxed them into silliness. She shot with a Canon EOS 5D and 24–70mm f/2.8L Canon EF lens; 1/125 sec at f/5, ISO 320.**

Working with Groups

Ironically, the best way to capture individual personalities may be to photograph them with others. Subjects who are particularly self-conscious and nervous whenever a camera comes out often relax when someone else is in the frame. These ancillary subjects can take the pressure off, offering a distraction that produces engaging facial expressions in an otherwise uncomfortable subject.

You don't even have to leave the other person in the photo. When your goal is to photograph grandparents, for example, shoot them with a grandchild, framing the shot so the child can be cropped out later.

Barbara Peacock, a pro shooter (barbarapeacock.com) based in Westford, MA, who photographed the snacking sisters here, agrees that groups can be easier than individuals. "Siblings are great to shoot in pairs," she says. "They have this symbiotic thing going that can work to a photographer's advantage."

Individuals in groups tend to quickly engage with each other, helping them to ignore the camera. With some pairings, capturing great facial expressions can be relatively easy.

BARBARA PEACOCK

WorldMags.net

ANNE MAKASKE

WorldMags.net

Relaxing Your Subject

When Anne Makaske set about making this stunning black-and-white portrait of her grandmother, she knew her model would be uneasy. "To take her mind off the camera, I started by taking pictures of her home, of a house plant, testing the flash, and checking the camera," she says. "When I started to take her picture, she had forgotten the camera and wasn't aware that she was my actual subject."

Based near Arnhem in the Netherlands, Makasker (annemakaske.com) stresses the importance of patience in relaxing her subjects. It's only after they become accustomed to the camera, that they start to reveal their true character. It also allows you to capture natural gestures, rather than stiff poses.

"Making a portrait takes time," she says. "Whenever you want to see a part of your subject's soul reflected in your image, you need to invest time and learn what moves your model. Discover their characteristics, and try to bring these traits out."

Watch, Don't Direct

Body language plays an even bigger role in depicting individual personalities and roles in group settings. In her book, *The Mark of Abel* (Keher Verlag, 2012), Lydia Panas, a Kutztown, PA-based fine-art photographer (www.lydiapanas.com), examines interfamily relationships in a series of expressive group portraits, including the rural Pennsylvania father and his four children shown here.

How does she get such insightful images? "By watching very closely," she says. "I try not to direct, because whenever I ask someone do something specific, they don't really do what I want, and the result is often awkward. I've learned to trust that something will happen on its own. I watch to see how my subjects arrange themselves, who stands in front, or on the side, and who seems to dominate. Then I go under the black hood [of her 4x5-inch view camera] and wait to see what happens."

USE B&W FOR OLDER SUBJECTS. **Anne Makaske felt the color version of this portrait of her giggling granny had too many distractions. Shot with a Nikon D70 and Sigma 18–200mm f/3.5–6.3 lens; 1/60 sec at f/5.3; ISO 200.**

AVOID THE STAGED LOOK. **Lydia Panas wanted this rural family to cohere as a group, but without looking posed. Working with Horseman 4x5 view camera, she waited for the right moment.**

Panas attributes her success to not being critical—and, yes, many subjects will often infer criticism if you start to direct them. "I want my subjects to feel good about themselves. If you direct too much, they get confused."

Like Makaske, she finds that patience pays off. "I try to wait until I can relate to the subjects, before I start working in earnest. It usually happens when what they're saying to each other begins to make sense to me," she says. "It's a very intuitive process, and one that's very exciting."

Wardrobe and Props

Often, clothing choices can make or break a portrait. It shouldn't distract from your subject or clash with the background. "I ask my subjects to wear dark, muted colors—no patterns and no jewelry," says Panas, who mainly shoots outside. "I like for the clothing colors to work with my backgrounds, which are mostly the greens and gray of nature. A white shirt wouldn't work."

She also likes to make sure the style of clothing in group portraits is roughly congruent from subject to subject, without actually matching. "If some subjects are casually dressed, and others more formally, it can [adversely] impact the overall image," she says.

The two sisters in Barbara Peacock's photo benefitted from her eye for color. Clean, strong hues in the clothing, props, and backgrounds all work to imply a sunny, child-friendly world. "The house belongs to a friend of mine," Peacock says. "I was lucky there were many colorful backgrounds. My job was to make sure the kids were positioned so that I could utilize that color."

So while both the clothes your subjects wear and the environment in which you photograph them should reflect their personalities, make sure they don't fight each other. If they do, consider changing one—or both.

LYDIA PANAS

WorldMags.net

Hoodman builds RAW STEEL ruggedness and "Pin Guard$_{tm}$" into a new SuperSpeed USB 3.0 UDMA Card Reader

Enjoy time saving 5 Gbps data transfers of CompactFlash or SD cards with a new ruggedized RAW STEEL SuperSpeed USB 3.0 UDMA card reader from Hoodman. Downloads are up to 10 times faster than USB 2.0 specs.

Hoodman built the new reader into a ruggedized metal housing and added a new concept called "Pin Guard". Pin Guard is an innovative drop down door that keeps reader pins protected until a CompactFlash card is inserted into the reader. Reinforced cable inputs, metal housing and "Pin Guard" all work together to yield the most durable card reader made.

*Supports CompactFlash, SD, SDHC, SDXC & UHS-1 memory cards

Model# HCKP

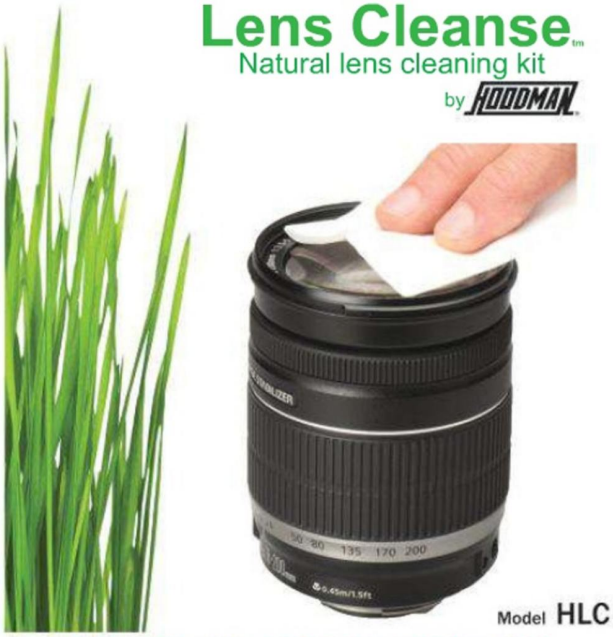
Cinema Kit Pro for DSLR Video Capture

The Cinema Kit Pro gives you all you need for improved outdoor video capture on your DSLR camera. With the HoodLoupe pressed up against your eye, you will have a glare free LCD screen to pull focus from, German glass to view through and 3 points of contact for steady hand helds shots. The Cinema Kit Pro mounts to the hot shoe in just seconds so your rig and camera mounts are always open for use.

Lens Cleanse$_{tm}$

Natural lens cleaning kit

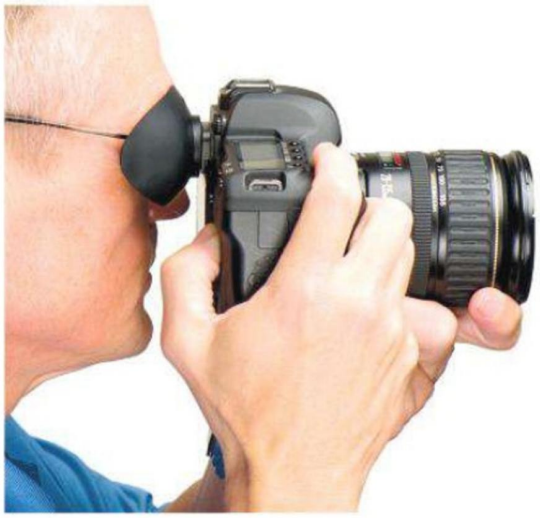
by HOODMAN



Model HLC

Enzyme activated / Eco responsible

Specially formulated enzymes actually breakdown grime to super clean photographic lenses and filters without harming delicate optical coatings or the environment. Convenient wet & dry kits store in your camera bag ready to tear open as needed.



HoodEYE$_{tm}$ for shooters who wear glasses!

HoodEYE links your eye to camera for improved viewfinder optics. New oversized eyecup, designed specifically for use with glasses, reaches back to cover light leaks behind your glasses. Easily upgrade your camera eyepiece in seconds. Five models fit all Canon and Nikon Digital SLR cameras. Patented, self locking mount system keeps HoodEYE securely in place. When ordering, make sure to order the model for your camera with a G at the end for Glasses.

PATENT US 8,831,142 B2

Inspired Imaging Tools$_{tm}$

www.HoodmanUSA.com 800.818.3946

WorldMags.net

LAB

AUTHORITATIVE TESTS, REVIEWS, AND BUYING ADVICE

LENS TEST: SIGMA 18–200MM F/3.5–6.3 II DC OS HSM
84

LENS TEST: ROKINON 24MM F/1.4 AS UMC
88

CAMERA TEST

COMPACT REVENGE

Canon's new flagship G-series model takes aim at ILCs

CANON'S G-SERIES has long been a go-to model for pros and enthusiasts looking for a camera to carry when they're not using a DSLR. But these days, interchangeable-lens compacts have captured the imagination of many such shooters.

In response, Canon has served up the 14.3MP PowerShot G1 X ($800, street)—a fixed-lens camera with a large 1.5-inch CMOS sensor. At 18.7x14mm, the G1 X's sensor is larger than the one found in Micro Four Thirds ILCs, but smaller than the APS-C-sized sensors used in Samsung's NX and Sony's NEX cameras. Add to that 1920x1080p24 video capture, an articulating 3-inch 921K-dot LCD screen, and a 4X zoom, and you've got a package that may be compelling

CANON G1 X

14.3MP CMOS 1.5-in. sensor
1920x1080p24 video capture
3-inch 922,000-dot articulated LCD screen
4X optical zoom covers 28–112mm
$800 (street)

SATOSHI

WorldMags.net

enough to make people wonder if an ILC is really necessary. Our lab tests reinforce that idea, showing that you can get very impressive images from a fixed-lens camera. Ultimately, the decision will come down to whether or not you want swappable lenses.

In the Test Lab

Since we usually use a 50mm lens for our lab tests (or a kit lens in the case of ILCs), we performed our lab tests of the G1 X with the lens zoomed to an equivalent of 50mm. The only exception was the image stabilization test, which we shot with the lens zoomed to its farthest telephoto setting, a 112mm equivalent.

That said, the G1 X turned in wonderful results in our lab tests. Overall Image Quality earned an Extremely High rating at ISO 100 and ISO 200, while Canon's delicate hand at noise reduction caused it to drop to a Very High rating at ISO 400 and ISO 800.

Resolution at ISO 100 measured 2310 lines per picture height for an Extremely High rating. The camera holds most of this resolution up to ISO 800, where it yielded 2300 lines. At ISO 1600, where Canon turns up luminance noise reduction significantly, it drops to 2220 lines. At its top sensitivity of ISO 12,800, the G1 X showed 1710 lines.

Compare these results to those of the Olympus Pen E-P3, which managed 2240 lines with its 12.3MP Four Thirds-sized sensor at its lowest sensitivity of ISO 200, and you will see that the G1 X really can compete with ILCs. And compare the G1 X to

CANON POWERSHOT G1 X

WHAT'S HOT

Extremely high image quality.

WHAT'S NOT

Doesn't focus at very close distances.

WHO IT'S FOR

Shooters who don't want swappable lenses, but want high-quality images.

SATOSHI (CAMERA TOP); LINZEE LICHTMAN (LCD IMAGE)

WorldMags.net

LOOKING FOR

CA$H?

WE'VE GOT IT

We Pay Top Dollar
for rare pieces & collections

Extra Cash Bonuses
for current models

Easy online quotes
at: adorama.com/sell

We want to buy your used or unused photo equipment!

Adorama spent millions of dollars in 2010 buying 35mm, Medium & Large Format, Scopes, Video and Digital equipment, **paying above market value**. Adorama pays **top dollar** for individual items, rare pieces, collections and estates.

3 SMALL STEPS FOR GIANT PAYOUTS!

1 / FAST
We can arrange a **FREE** UPS insured pickup in the USA, or you may send it to us at your convenience.

2 / SIMPLE
Expect one of our agents to contact you as soon as your equipment is evaluated.

3 / SMOOTH
Your check, direct deposit or trade will be sent out promptly.

If you are not pleased with our offer, we will return the equipment at our expense.

ADORAMA TRADE +USED

Find out the value of your equipment:

Phone:
800-223-2500

Online Quote:
adorama.com/sell

e-mail:
used@adorama.com
Include your phone number

Bring it:
42 West 18th Street
New York NY 10011

Ship it:
Adorama
Att. Used Department
7 Slater Drive
Elizabeth, NJ 07206

WorldMags.net

Tokina
CONSUMER REBATES
January 1 - March 31, 2012

$40.00 REBATE!

AT-X 116 PRO DX
AF 11-16mm f/2.8
Available Mounts: Canon, Nikon, Sony Digital with APS-C sized sensors

$50.00 REBATE!

AT-X 16-28 F2.8 PRO FX
AF 16-28mm f/2.8
Available Mounts: Canon, Nikon Digital with Full Frame FX & APS-C sized sensors

Visit www.thkphoto.com for complete details and conditions of this offer.

THK PHOTO PRODUCTS, INC.
Tokina • HOYA • Kenko • SLIK
7642 Woodwind Drive, Huntington Beach, CA 92647

TEST RESULTS

SPECIFICATIONS

IMAGING: 14.3MP effective, 1.5-inch (18.7x14mm) CMOS sensor captures images at 4352x3264 pixels with 14 bits/color in RAW mode.

STORAGE: SD, SDHC, SDXC. Stores JPEG, CR2 RAW.

VIDEO: Up to 1920x1080p24 in MOV H.264 format; built-in stereo mic, no mic input; contrast-detection AF with continuous AF.

BURST RATE: Full-sized JPEGs and RAW files (P mode): 1.9 fps. Full-sized JPEGs (High-speed Burst HQ mode): 4.5 fps.

AF SYSTEM: TTL contrast AF with adjustable, continuously selectable AF points, face detection, AF tracking.

SHUTTER SPEEDS: 1/4000 to 60 sec.

METERING: Evaluative, Center-weighted average, Spot (size of spot not specified).

ISO RANGE: ISO 100–12,800 (in 1/3-EV increments).

FLASH: Built-in pop-up flash. Maximum wide angle range: 1.6–23 feet. Maximum telephoto range: 3.3–10.2 feet.

MONITOR: Articulating 3-in. TFT color LCD with 922,000-dot resolution.

OUTPUT: Hi-Speed USB 2.0 and mini HDMI video.

BATTERY: Rechargeable NB-10L Li-ion, 250 shots with LCD screen turned on or 7 hours playback time.

SIZE/WEIGHT: 4.6x3.17x2.55 in., 1.19 lbs with card and battery.

STREET PRICE: $800

INFO: usa.canon.com

Canon's own PowerShot S100, a 12.1MP compact whose sensor has about one-sixth the area of the G1 X's, and you really see a difference. At its best, the S100 served up 2100 lines, but, at its top setting of ISO 6400, lost a big chunk to land at 1300 lines.

We got unusual results in our standard noise test, which uses TIFFs generated from RAW files processed at the manufacturer's default noise-reduction settings. It seems as though Canon tries to hold on to resolution as much as possible through ISO 1600 by

delaying heavy noise reduction until it's absolutely necessary. Noise increases from Extremely Low at ISO 100 to Moderately Low at ISO 800, only to fall back to a Low rating at ISO 1600, before rising again. We were impressed that Canon kept the noise at acceptable levels all the way up to ISO 6400, and, at ISO 12,800, held it to 3.1—only a hair above our 3.0 cutoff for an Unacceptable rating.

But when we tested JPEGs captured simultaneously with the RAWs, they told a different story. In this case, noise remained Low or better all the way up to ISO 3200, remained acceptable at ISO 6400, but landed squarely in Unacceptable territory at ISO 12,800 with a 3.6. Of course, as you might expect, resolution took a bigger hit at some ISOs, thanks to more aggressive noise reduction, but JPEG shooters should feel comfortable turning the sensitivity up on this camera well beyond what you would with a typical compact.

Color accuracy just barely earned an Excellent rating with an Average Delta E of 8.0 in our test. If this result had been even slightly worse, it would have pulled the overall image quality down one notch in the ratings.

In the Field

Noticeably chunkier than its G-series brethren, the G1 X nonetheless feels good in the hand. Toting it around New York City, we were able to carry it in a man's coat pocket without a problem. Women with small purses may balk at its size, but even a medium-sized handbag should hold this camera.

The body itself feels rugged, and it sports the advanced controls that you'd expect on a camera of this class. A convenient second dial concentric with the mode dial lets you adjust exposure compensation. A control wheel in front of and below the shutter button is bolstered by one that encircles the control pad on the camera's back. In manual exposure mode, one wheel controls shutter speed and the other aperture. You can access most of the other settings through the control pad, the dedicated buttons surrounding it, or the intuitive overlay activated by the Function button when pressed.

Spanning 28–112mm (equivalent), the G1 X's lens covers a very versatile range of focal lengths.

While most of G1 X's menus and controls are simple to understand, the autofocus modes can be a bit confusing, especially if you've never used a Canon DSLR. Separate menu items let you

activate continuous AF and Servo AF, while the AF-frame menu item lets you select tracking AF. So, if you want burst shooting with continuous tracking AF, you might not know what to do. Servo AF is the best bet for tracking, and you can combine it with tracking AF to cover all bases. Just remember to turn Servo AF and continuous AF off if you want to return to normal (single-shot) AF.

The video footage we shot with the G1 X looked very nice, and with tracking AF we found it easy to shoot. The AF tracking also worked well for still shooting. Single-shot focusing is fast compared with older compact cameras, but about average compared to the current crop of point-and-shoots.

Macro shooting was one of the few areas in which the G1 X falls short of many compact cameras. Since the lens is so big (necessitated by that big sensor), it can't focus when very close to a subject. With the lens at its widest setting of 28mm equivalent, the G1 X still manages to focus only to 7.9 inches in macro mode, while some compacts can get as close as a few millimeters. In normal mode, the closest it can get is 1.3 feet. We found ourselves using macro mode for some shots where we would normally never need it.

Though a little frustrating, we didn't find this a deal breaker, but it's something to keep in mind if you're a fan of macro. (Canon makes an adapter that allows the lens to accept 58mm screw-in filters; with it, you can mount Canon's two-element close-up filter or a third-party close-up lens.)

Also, when in macro mode, the built-in flash can cast a shadow on the lower right-hand portion of the frame. In normal shooting this wasn't an issue.

The built-in flash on the G1 X is just as small as those found in most compact cameras. If you want more flash power, the hot shoe on top of the camera will accept any Canon-compatible flash.

Bottom Line

Has Canon created a viable alternative to interchangeable-lens compacts? We say yes. The improved image quality compared with compacts is drastic enough to make the G1 X a serious competitor to ILCs.

The tough decision comes when you look at the $800 price tag. Ultimately, the question is whether you want to deal with swappable lenses. If so, you can buy Panasonic's Lumix GX1 with its standard 14–42mm f/3.5–5.6 kit lens for the same price. If not, the Canon PowerShot G1 X makes a lot of sense, and the images you get are worth the extra money over the Canon's S100 or the G12. *—Philip Ryan*

PowerShot G1 X
DIGITAL CAMERA

The Pinnacle of Powershot

Canon PowerShot G1 X Digital Camera

Bright, fast and more creative than ever: advanced technologies come together for an exciting new camera that moves beyond anything the G-Series has seen before. The PowerShot G1 X digital camera will inspire advanced amateurs who have embraced the G-Series to explore new realms of photographic expression, and give pros an excellent camera that complements their creative demands.

- 14.3-megapixel CMOS Sensor
- 4x Optical Zoom, 28mm IS Lens
- 3.0" Vari-angle LCD Screen
- RAW Shooting Mode
- 1080p Full HD Video

$799.99

PowerShot S100
DIGITAL CAMERA

Sleek and Serious

Canon PowerShot S100

- 12.1-megapixel CMOS Sensor
- 5x Optical Zoom, 24mm IS Lens
- 1080p Full HD Video
- 3" LCD Screen
- GPS Photo Tagging

$429.99

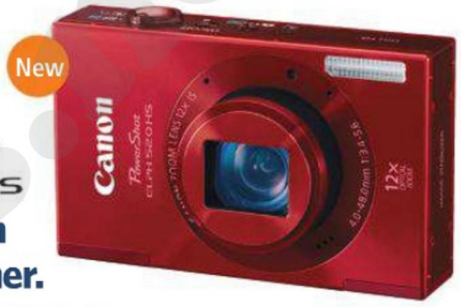
PowerShot
ELPH 520 HS

An Ultra-Slim High Performer.

Canon PowerShot ELPH 520 HS

- 10.1-megapixel CMOS Sensor
- 12x Optical Zoom, 28mm IS Lens
- 1080p Full HD Video
- 3" LCD Screen
- DIGIC 5 Image Processor

$299.99



PowerShot
ELPH 110 HS

Style, Sophistication, and Power.

Canon PowerShot ELPH 110 HS

- 16.1-megapixel CMOS Sensor
- 5x Optical Zoom, 24mm IS Lens
- 1080p Full HD Video
- 3" LCD Screen
- DIGIC 5 Image Processor

$249.99

EOS
REBEL
T3

The Beauty of Simplicity

Canon EOS Rebel T3 Kit

- Includes 18-55mm IS Lens
- 12.2-megapixel CMOS Sensor
- 720p HD Video
- 2.7" LCD Screen
- ISO rating up to 6400
- High speed 9-point AF system

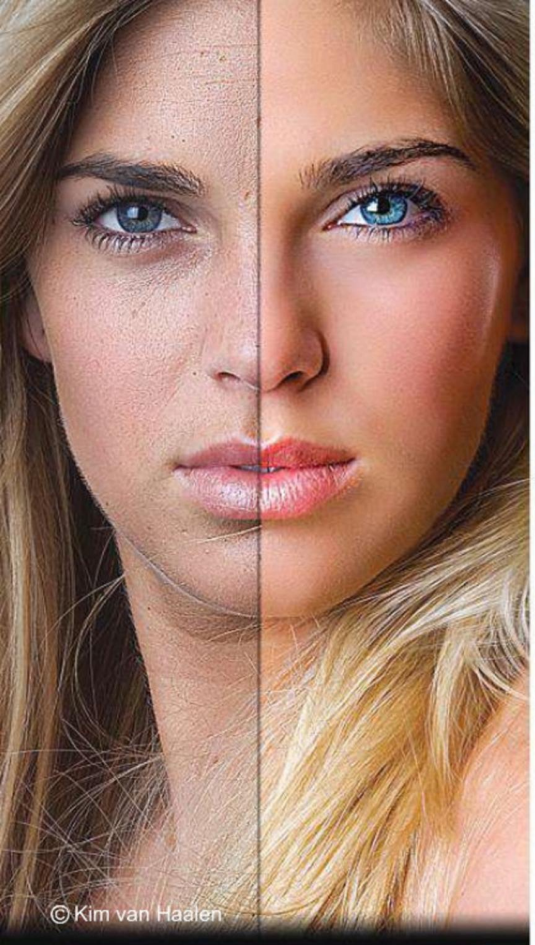
$549.99

Expertise Is The Difference.

OneCall's Spokane, WA, call center staff is highly trained, experienced and non-commissioned. We're happy to answer your questions about technology, compatibility, performance and more. OneCall's PriceShield matches prices daily with other electronics retailers.

oneCALL

www.onecall.com | 1.800.633.5255



- Enhances any aspect of the face, hair or skin quickly and easily
- New ClearSkin® 2 defect elimination and skin regeneration technology
- Enhance Skin Only mode
- Improved intelligent brushes
- Unlimited fully customizable presets
- Works on women, men and children
- Picture and lighting controls

10% OFF

Popular Photography readers get an **EXTRA 10% OFF** with the code **PFK738** when buying online.

DOWNLOAD YOUR FREE TRIAL NOW!
WWW.PORTRAITPROFESSIONAL.COM

PORTRAIT PROFESSIONAL 10
The fastest, easiest portrait touch-up software.

AMATEUR PRO

Good One

SIGMA SLIMS DOWN ITS TOP ALL-IN-ONE

RELEASED IN October of 2011, this second iteration of Sigma's stabilized 11.1X all-in-one zoom ($499, street) offers two seemingly significant upgrades: a high-tech FLD glass element, plus Sigma's silent HSM focusing motor. This APS-C-only zoom is the full-frame equivalent of about 30–320mm, depending on your camera's body.

Noticeably lighter and more compact than the earlier version, the new zoom is more than a half-inch shorter at all focal lengths, and several ounces lighter. It takes 62mm filters, down from 72mm. Like the older lens, it is compact enough to cast no shadow at any focal length or focusing distance when used with our test camera's built-in flash.

Our test sample's unusually loose zooming action produced significant zoom creep when the camera/lens rig was aimed up or down. This can cause future focus and composition issues, especially if the zoom helical gets looser with age, as such things are wont to do. The barrel

SIGMA 18–200MM F/3.5–6.3 II DC OS HSM

WHAT'S HOT
Relatively good distortion control.

WHAT'S NOT
Dim maximum aperture, zoom creep.

WHO IT'S FOR
APS-C shooters shopping for an optically strong, rugged all-in-one.

SPECIFICATIONS

18–200MM (18.65–201.10mm tested), f/3.5–6.3 (f/3.43–6.13 tested), 18 elements in 14 groups. Focus ring turns 60 degrees. Zoom ring turns 80 degrees. Focal length marked at 18-, 28-, 35-, 50-, 80-, 135-, and 200mm.
DIAGONAL VIEW ANGLE: 69–7 degrees.
WEIGHT: 1.16 lbs. **FILTER SIZE:** 62mm.
MOUNTS: Canon AF, Nikon AF, Pentax AF, Sigma AF, Sony/Minolta AF.
INCLUDED: Lenshood.
STREET PRICE: $499.
WEBSITE: www.sigmaphoto.com

TEST RESULTS

DISTORTION: At 18mm, 0.54% (Visible) barrel. At 50mm, 0.41% (Visible) pincushion. At 100mm, 0.32% (Visible) pincushion. At 200mm, 0.26% (Slight) pincushion.
LIGHT FALLOFF: At 18mm, gone by f/5. At 50mm, 100mm, and 200mm, no detectable light falloff.
CLOSE-FOCUSING DISTANCE: 12.81 inches.
MAXIMUM MAGNIFICATION RATIO: At 18mm, 1:10.74. At 50mm, 1:6.11. At 100mm, 1:3.27. At 200mm, 1:2.63.
IMAGE STABILIZATION: 1.5–2 stops.

New Digital Photography Books From Course Technology PTR

Photocine: Digital Filmmaking with DSLRs
1-4354-5736-6 • $29.99

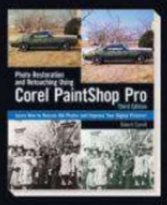
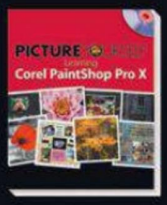
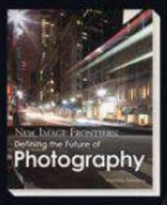


Photo Restoration and Retouching Using Corel PaintShop Pro X4, Third Edition
1-4354-6057-X • $39.99



Picture Yourself Learning Corel PaintShop Pro X4
1-4354-6059-6 • $29.99

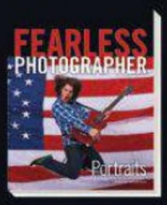
Shake, Rattle, & Shoot: The Business of Baby Photography
1-4354-5774-9 • $34.99



New Image Frontiers: Defining the Future of Photography
1-4354-5857-5 • $29.99

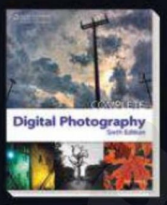
A Shot in the Dark: A Creative DIY Guide to Digital Video Lighting on (Almost) No Budget
1-4354-5863-X • $44.99

Fashion Flair for Portrait and Wedding Photography
1-4354-5884-2 • $34.99



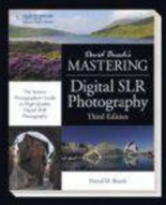
Fearless Photographer: Portraits
1-4354-5824-9 • $34.99

Picture Yourself Making Creative Movies with Corel VideoStudio Pro X4
1-4354-5726-9 • $29.99



Complete Digital Photography, Sixth Edition
1-4354-5920-2 • $44.99

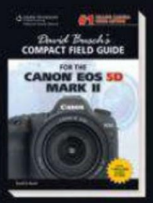
Killer Photos with Your iPhone
1-4354-5689-0 • $24.99



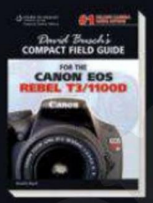
David Busch's Mastering Digital SLR Photography, Third Edition
1-4354-5832-X • $39.99

New Camera Guides from Bestselling Author David Busch!

Created with the expertise of bestselling author and photographer David Busch, Course Technology PTR offers books, iPhone applications, and quick reference guides on the latest digital SLR cameras from Canon, Nikon, Sony, Pentax, Olympus, and Panasonic. Learn more at courseptr.com/davidbusch.

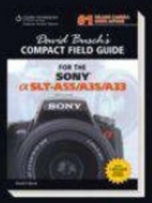


David Busch's Compact Field Guide for the Canon EOS 5D Mark II
1-4354-6000-6 • $13.99



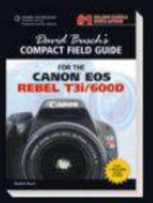
David Busch's Compact Field Guide for the Canon EOS Rebel T3/1100D
1-4354-6030-8 • $13.99

David Busch's Compact Field Guide for the Nikon D5100
1-4354-6087-1 • $13.99

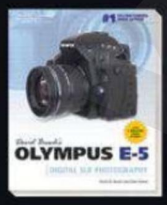


David Busch's Compact Field Guide for the Sony α SLT-A55/A35/A33
1-133-73242-9 • $13.99

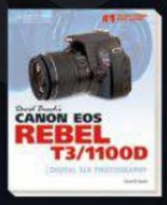
David Busch's Compact Field Guide for the Nikon D7000
1-4354-5998-9 • $13.99



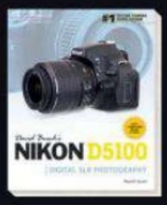
David Busch's Compact Field Guide for the Canon EOS Rebel T3i/600D
1-4354-6032-4 • $13.99



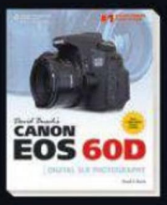
David Busch's Olympus E-5 Guide to Digital SLR Photography
1-4354-5948-2 • $29.99



David Busch's Canon EOS Rebel T3/1100D Guide to Digital SLR Photography
1-4354-6026-X • $29.99



David Busch's Nikon D5100 Guide to Digital SLR Photography
1-4354-6085-5 • $29.99



David Busch's Canon EOS 60D Guide to Digital SLR Photography
1-4354-5938-5 • $29.99

David Busch's Nikon D7000 Guide to Digital SLR Photography
1-4354-5942-3 • $29.99

David Busch's Canon EOS Rebel T3i/600D Guide to Digital SLR Photography
1-4354-6028-6 • $29.99

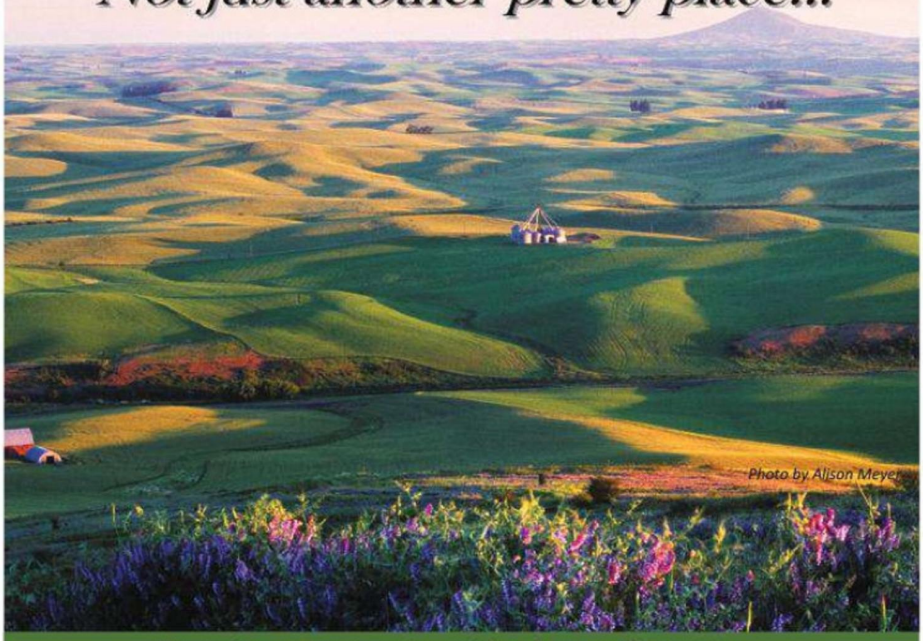
COURSE TECHNOLOGY
CENGAGE Learning
Professional • Technical • Reference
courseptr.com

Available from Amazon.com, Barnes & Noble, and other fine retailers nationwide.

All books are also available on Kindle, Nook, iPad, and other digital readers.

WorldMags.net

Pullman, Washington
Not just another pretty place...



For a free photography guide please call or visit:
Pullman Chamber of Commerce
800-365-6948
www.pullmanchamber.com
Scan code to see more beautiful photos of the Palouse!

NEW DESIGN!
LENS CLEANER
LENSPEN®

- New look
- New features
- Same great results!

LONG LIFE 500+ USES
SAFE ON ALL LENSES
NO LIQUIDS

If it doesn't say LensPen,
It's not a genuine LensPen.
A photo necessity
for 20 years.

Special offer at lenspen.com/popapr
Enter promo code POPAPR and save 50%!

SIGMA 18–200MM F/3.5–6.3 II DC OS HSM

lock has little use here, as it can only be engaged at the lens' contracted 18mm focal length setting. But this isn't to suggest the lens suffers from what manufacturers call "slop." Like its older brother, construction quality is high, with rugged switches and rings—it feels solid.

The turning radius for the manual focus ring is short (60 degrees), so unlike the Rokinon tested this month, its subject distance scale is practically useless for low-light scale focusing. However, the Sigma's barrel-top macro scale ranges from 1:3.8 to 1:13.2, and might appeal to close-up shooters.

Nearly silent and satisfyingly fast, the HSM focusing motor is a welcome improvement over that of the older lens, which we described in our October 2007 test report as "moderately fast and somewhat noisy."

On our optical bench, the new lens turned in Excellent-range SQF numbers at all four tested focal lengths. This is great for an all-in-one zoom, as most in this class dip into the Very Good sharpness range at at least one focal length. (And Nikon's 18–200mm dipped past Very Good into the Good range at 200mm.) Ironically, the heralded incorporation of Sigma's special FLD glass seems to have produced the opposite of the intended effect: Despite the FLD element, Version II's performance numbers were slightly below those of Version I's at our 11x14 benchmark magnification, though all were in the Excellent range.

The new lens' distortion control proved problematic, as well. The earlier lens produced Visible-range barrel distortion (0.57% at 18mm) at only one of

CONTINUES ON PAGE 104

ABE'S of MAINE

CELEBRATING 30 YEARS

Cameras & Electronics **Since 1979**

CALL TOLL FREE: 1-800-531-2237

- Order online 7 days a week
- Worldwide Shipping
- All major credit cards accepted
- 30 Day Money Back Guarantee*

We have thousands of products at deeply discounted prices! Over 30 years of quality merchandise and quality service makes Abe's of Maine the right choice for your electronic needs.

Canon EOS 7D
18 Megapixel Digital SLR Body
In Stock!

Canon EOS Rebel T3i w/18-55 IS Kit
New Low Price!

Panasonic DMC-FZ150K
12.1 MP/24X Optical Zoom Digital Camera
In Stock!

Pentax Optio WG-216
Megapixel Waterproof Digital Camera
In Stock!

Sony DSC-HX9
16.2 MP Digital Camera
All Colors
In Stock!

CanonXA-10 HD Camcorder w/64GB Internal Memory
In Stock!

Canon Vixia HF-G10 32 HF Flash Memory Camcorder
Call In For Latest Price!

Sony HDR-CX700V Full Hd 96 GB Flash Memory Camcorder
In Stock!

JVC
GZ-GX1BUS Full HD, 10X Optical Zoom Camcorder
$899.00

Panasonic
HDC-TM900K HD 3D CapableCamcorder
New Low Price!

Samsung
LN-55C650 55" 3D 1080P LED Television
In Stock!

Samsung
UN-LN40D6000 40" 1080P LED Television
In Stock!

Samsung
TCP55VT30 55"3D 1080P Plasma Television
In Stock!

Sharp
LC70LE732U 70" 1080P LED Television
In Stock!

Sharp
LC52LE830U 52" 1080P LED Television
In Stock!

Audio

Categories	Brands
Receivers	Sony
Speakers	Denon
Home Theatre Systems	Yamaha
	Samsung
DVD Players	Boston
HD Radio	Acoustics

Car Electronics

Categories	Brands
Receivers	Pioneer
Video	Panasonic
Radar	Sony
Detectors	JVC
CD Changers	Jensen
Amplifiers	

Projectors

Brands	
Optoma	Sanyo
Mitsubishi	Casio
NEC	Hitachi
BenQ	Canon
Epson	Sharp

GPS

Brands	
Garmin	Pioneer
Magellan	Atlantis
TomTom	Whistler
GoodYear	
Clarion	

Laptops

Brands	
Acer	HP
Samsung	Lenovo
Toshiba	

DJ Equipment

Categories	Brands
Mixers	Rane
Amplifiers	Pioneer
Systems	Stanton
Speakers	Numark
CD/DVD Players	Nady

Large Appliances

Categories	Brands
Refrigerators	LG
Washers/Dryers	Bosch
	GE
Dishwashers	Fridgidaire
Ranges	Whirlpool
Microwaves	

Small Appliances

Categories	Brands
Coffee Makers	Cuisinart
Mixers	Waring Pro
Knives	J.A. Henckel
Blenders	Kitchen-Aid
Juicers	Nesco

Fitness Equipment

Categories	Brands
Treadmills	Bowflex
Bikes	Proform
Gyms	Horizon
Free Weights	LifeSpan
Elliptical	Evo

Musical Instruments

Categories	Brands
Guitars	Dean
Drums	Daisy Rock
Keyboards	Halo
	M-Audio
	ION

Please visit our website for product information

www.abesofmaine.com

*Some exclusions apply

WorldMags.net

Advertorial

New York Institute of Photography

Helping Photographers Do More Since 1910

New York Institute of Photography (NYIP) has a single mission: To provide a high quality non-traditional learning experience for photographers at all levels. We were pioneers in embracing digital imaging, and our impressive roster of graduates includes hundreds of entrepreneurs, artists, musicians, professors, and pro photographers.

You can pursue your passion by taking the acclaimed NYIP Complete Course in Professional Photography, the Complete Course in Digital Photography, or the Short Course, Fundamentals of Digital Photography. Whichever you choose, your photography will never be the same. To give you a clearer picture, we'll let a recent graduate tell you why.

From novice to emerging pro, Michelle Milliman is a homemaker and a homeschooling mother of three who lives in the Rochester, NY area. "I've always been passionate about photography," she recalls. "But before I took an NYIP course I couldn't make my creative visions happen. Now I really understand my camera and how to use it effectively, and I've learned the fundamentals of lighting, composition, and image control. I'm supplementing the family income by shooting portraits professionally for clients and fundraising projects. I went from being a mom to being a business owner, and my goal is to become a full-time pro. None of this could have happened without NYIP."

©Michelle Milliman

FOR MORE INFORMATION VISIT WWW.NYIP.COM

Lens Lite

YUP, ANOTHER SPEEDY MANUAL

JOINING THE 8mm, 14mm, 35mm, and 85mm manual-focus, full-frame Rokinons, this 24mm boasts the highest street price ($699) in the line by far. Like Rokinon's 35mm f/1.4, it provides no electronic communication between camera and lens, requiring users to open the aperture to its widest setting for composing and focusing, then stop down to the working aperture to make the exposure. The good news? Your camera's aperture-priority autoexposure mode will work—after a fashion.

A little lighter in weight, the Rokinon 24mm is about the same size as its two most comparable tested competitors, the Canon 24mm f/1.4L II USM ($1,661, street) and Nikon 24mm f/1.4G ED AF-S ($1,999). The Rokinon offers robust construction, an attractive finish with a matte-black stippled surface, and easy-to-read markings.

As befits an MF-only lens, the focusing ring is generously sized, very smooth- and long-turning for extremely fine focusing. Another important feature is its easily legible

depth-of-field scale for the full aperture range—very handy for scale-focusing and especially useful in dim light. (Our staffers had difficulty focusing this lens in dim light, despite the bright

CONTINUES ON PAGE 108

ROKINON 24MM F/1.4 ED AS UMC
WHAT'S HOT
Wide, fast, and sharp.
WHAT'S NOT
No autofocus or electronic coupling.
WHO IT'S FOR
Shooters with the patience for manual and a passion for f/1.4.

SPECIFICATIONS

24MM (24.84mm tested), f/1.4 (f/1.45 tested), 13 elements in 12 groups. Focus ring turns 140 degrees.
DIAGONAL VIEW ANGLE: 84 degrees.
WEIGHT: 1.29 lbs. **FILTER SIZE:** 77mm.
MOUNTS: Canon, Four Thirds, Nikon, Pentax, Samsung NX, Sony/Minolta.
INCLUDED: Lenshood, lens pouch.
STREET PRICE: $699.
WEBSITE: rokinon.com

TEST RESULTS

DISTORTION: 0.36% (Visible) barrel.
LIGHT FALLOFF: Gone by f/4.
CLOSE-FOCUSING DISTANCE: 9.75 inches.
MAXIMUM MAGNIFICATION RATIO: 1:4.84.

800-947-9980
212-444-6666
Fax: 212-239-7770

420 Ninth Avenue
Corner of 34th Street
New York, N.Y 10001

Store & Mail Order Hours: Sunday 10-5 | Mon-Thurs 9-7 | Friday 9-1 EST/9-2 DST | Closed Saturday

B&H PHOTO - VIDEO - PRO AUDIO
The Professional's Source™

Over 300,000 products, at your leisure
www.BandH.com

B&H Online

- **Search Capabilities**
  Find products fast
- **Podcasts**
  B&H experts provide essential product information in video interviews
- **Product Demos**
  View products from every angle, right on your computer screen
- **Customer Reviews**
  Useful feedback from other customers to help you decide
- **Live Help**
  Chat online with support staff

When in New York,
Visit our SuperStore

- Over 70,000 square feet of the latest gear
- The most knowledgeable Sales Professionals
- Hands-on demos
- Convenient free parking available

Upcoming Holiday Schedule

March 8 ..... Closed
April 6 - April 14 ..... Closed

We Buy, Sell, and Trade
Used Equipment

888-520-3010
Speak to a Sales Associate

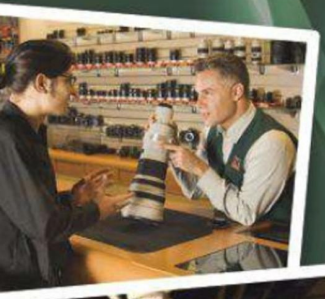
www.BandH.com/used
Shop conveniently online

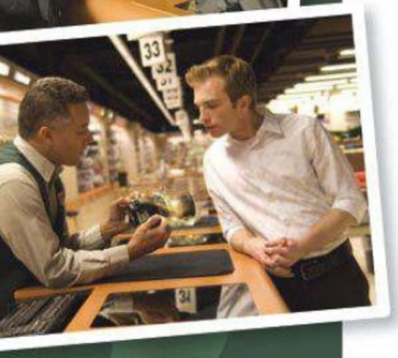
Prices, specifications, and images are subject to change without notice. Manufacturer rebates are subject to the terms and conditions (including expiration dates) printed on the manufacturers' rebate forms. Not responsible for typographical or illustrative errors. © 2000-2012 B & H Foto & Electronics Corp.
NYC DCA Electronics Store Lic. #0906712; NYC DCA Electronics & Home Appliance Service Dealer Lic. #0907905; NYC DCA Secondhand Dealer – General Lic. #0907906

B&H
PHOTO - VIDEO - PRO AUDIO
The Professional's Source™

When in New York,
Visit our SuperStore

420 Ninth Ave.
Corner of 34th Street
New York, N.Y. 10001





- Over 70,000 square feet of the latest gear
- The most knowledgeable Sales Professionals
- Hands-on demos
- Convenient free parking available

Subscribe to our free Catalog
BandH.com/catalog
212-444-6633

Canon Powershot Elph 110HS

- 5x Optical Zoom • 4x Digital Zoom
- 4.3-21.5mm f/2.7-5.9 (35mm equiv: 24-120mm) • 3.0" LCD
- SD/SDHC/SDXC Card Slot
- Full 1080p HD Video with Stereo Sound
- Super Slow Motion Movie Records 240fps

#CAPSE110 Black, Blue, Green, Pink, Red, Silver*

16 Mega Pixels

Canon Powershot G12

- 2.8" Vari-Angle LCD • 1280 x 720p HD Video Capture • Stereo Sound for Video
- 5x Optical Zoom • 4x Digital Zoom
- 6.1-30.5mm f/2.8-4.5 (35mm equiv: 28-140mm) • SD/SDHC/SDXC Card Slot
- RAW File Mode • Dim.: 4.41 x 3 x 1.9"

*#CAPSG12**

10 Mega Pixels

Canon PowerShot G1 X

- 3.0" Vari-Angle LCD • Full 1080p HD Video • Optical Viewfinder
- 4x Optical Zoom • 4x Digital Zoom
- 15.1-60.4mm f/2.8-5.8 (35mm equiv: 28-112mm) • SD/SDHC/SDXC Card Slot
- Manual & Numerous Other Shooting Modes

#CAPSG1X

14 Mega Pixels

Nikon Coolpix AW100

- 3.0" LCD • 5x Optical Zoom
- 5-25mm f/3.9-4.8 (35mm equiv: 28-140mm) • SD/SDHC/SDXC Card Slot
- Waterproof to 33' Deep
- Shockproof for Drops up to 5'
- Full HD 1080p Video with Stereo Sound

#NICPAW100 Black, Blue, Orange*

16 Mega Pixels

Panasonic Lumix DMC-LX5

- 3" LCD • HD Video Recording
- 3.8x Optical Zoom • 4x Digital Zoom
- 5.1-19.2mm f/2-3.3 (35mm equiv: 24-90mm) Leica DC Vario-Summicron
- SDHC/SDXC Card Slot • Raw Recording
- Dimensions: 4.32 x 2.58 x 1.69"

#PADMCLX5 Black, White*

10 Mega Pixels

SONY CyberShot DSC-W610

- 2.7" LCD • 720p HD Video
- iAuto Mode • 4x Optical Zoom
- 4.7-18.8mm f/2.8-5.9 (35mm equiv: 26-105mm) • Face Priority Function
- MS Duo, SD/SDHC/SDXC Card Slot
- Sweep Panorama Mode Up to 360°

#SODSCW610 Black, Blue, Green, Pink, Silver*

14 Mega Pixels

MEMORY CARDS

CF Compact Flash

	Delkin			Kingston				Lexar			Sandisk			
	Std	Pro	Combat 685x	Std	Elite Pro 133x	Ultimate 266x	Ultimate 600x	Platinum II 200x	400x	600x	Ultra 30 MBs	Extreme 60 MBs	Extreme Pro 90 MBs	100 MBs
4GB	16.99	19.99	—	9.95	12.95	—	—	18.95	—	—	18.10	—	—	—
8GB	26.95	24.99	72.99	14.95	16.95	—	—	27.95	39.95	69.95	29.95	49.95	—	—
16GB	39.95	39.99	154.99	—	—	27.50	57.95	49.95	73.95	118.50	54.95	94.95	129.95	—
32GB	79.95	79.99	299.99	—	—	59.74	119.95	—	121.49	223.85	—	153.95	239.95	—
64GB	—	142.50	579.99	—	—	—	—	—	—	—	—	—	474.95	—
128GB	—	—	—	—	—	—	—	—	—	—	—	—	—	879.95

MSDUO Memory Stick Pro Duo

	Sony	
	Mark II	Pro-HG HX 20 MBs
2GB	12.41	—
4GB	19.95	—
8GB	—	29.88
16GB	—	52.73
32GB	—	95.99

SDXC Extended Capacity

	Delkin	Kingston	Lexar	Sandisk		Panasonic
	Elite 45 MBs	Class 10 35 MBs	Class 10 20 MBs	Class 4 15 MBs	Class 10 90 MBs	Class 10 45 MBs
64GB	249.99*	309.95*	114.95	116.95	237.50*	229.95*
128GB	—	—	187.95	—	—	—

Note: Not all devices support SDXC cards *** UHS-1**

SDHC-UHS-1 Ultra High Speed

	Delkin	Kingston	Sandisk	Panasonic	
	Elite 80 MBs	Ultimate XX 35 MBs	Extreme Pro 90 MBs	Gold 25 MBs	Pro Class 10
8GB	39.99	39.95	31.99	29.95	54.95
16GB	74.99	76.95	59.99	54.95	113.50
32GB	149.99	146.50	119.95	101.97	204.95

SD HC Secure Digital High Capacity

	Delkin		Kingston				Lexar			Panasonic	Sandisk			Sony		
	Pro Class 6	Pro Class 10	Standard Class 4	Standard Class 6	Ultimate X Class 10	Micro Class 4 Multi Kit	Std Class 4	Platinum II 100x	Professional Class 10 133x	Silver Class 4 20 MBs	Std Class 4	Ultra	Extreme Class 10 30 MBs	Micro Class 4	Standard Class 4	Class 10	Micro Class 4
4GB	9.95	11.95	—	—	—	7.95	7.49	9.95	—	8.95	6.99	9.29	12.62	7.95	7.50	—	8.95
8GB	13.95	15.99	7.85	16.95	17.50	9.95	13.95	11.95	21.95	14.99	10.95	14.95	19.95	11.95	10.99	14.95	11.95
16GB	37.50	23.95	15.95	19.95	21.95	17.95	21.95	17.95	34.95	29.95	18.45	24.95	38.95	17.77	22.95	24.95	—
32GB	—	46.95	34.95	—	45.95	39.95	42.50	44.95	54.95	—	39.95	59.95	74.95	42.53	39.95	45.95	—

Oben™
You're On Steady Ground

Travel Tripods

Sturdy yet superbly lightweight tripods with legs that fold upward 180° to create an extremely compact package for transport – with the included head attached. For further versatility for travelers, one of the legs unscrews from the chassis and attaches to the head & carbon-fiber center column to form a working-height monopod. These full-sized tripods with head ensure a stable base for any DSLR body/lens combination with multiple accessories, or for a compact HD video camera.

- One Leg, Column & Head Form Monopod • Removable Head
- Forged Aluminum Chassis • Pan & Tilt Control • Retractable Spikes in Feet

Model	Included Head	Load Capacity	Max. Height	Folded	Weight	SKU #	Price
Anodized Aluminum Series with Head							
AT-3400	BA-00T	6.6 lb	56.7"	15"	3 lb	#OBAT3400BA00	$149.95
AT-3410	BA-00T	6.6 lb	59.4"	16.5"	3.4 lb	#OBAT3410BA00	$224.95
AT-3420	BA-0T	11 lb	62.6"	17.7"	4.2 lb	#OBAT3420BA0T	$259.95
6x Carbon Fiber Series with Head							
CT-3400	BB-0T	12.4 lb	56.7"	15"	3 lb	#OBCT3400BB0T	$349.95
CT-3410	BB-0T	16.8 lb	59.4"	16.5"	3 lb	#OBCT3410BB0T	$399.95
CT-3420	BB-1T	22 lb	62.8"	17.7"	4 lb	#OBCT3420BB1T	$449.95
CT-3500	BB-0T	12.4 lb	53.3"	12.8"	2.5 lb	#OBCT3500BB0T	$349.95
CT-3510	BB-0T	16.8 lb	60.6"	15.5"	3.2 lb	#OBCT3510BB0T	$399.95
CT-3520	BB-1T	22 lb	64.8"	16.5"	4 lb	#OBCT3520BB1T	$469.95

WorldMags.net

OLYMPUS PEN E-P3 DSLR

- 3" Touch Screen OLED
- TruePic VI Image Processor
- 4/3 Full Frame Zuiko Lenses
- SDHC/SDXC/UHS-1 Card Slot
- 3 Mode Image Stabilization
- 12,800 ISO & Built-In Flash
- 1080/60i HD Movie Capture
- All Metal Body with Full-Advanced Control
- Available in Black, Silver or White

*Kit with 17mm Zuiko Lens .....#OLEP317**
*Kit with 14-42mm Zuiko Lens.....#OLEP31442**

12 Mega Pixels

Panasonic Lumix DMC-GH2 Mirrorless System Camera

- 1920x1080 60i HD Video
- 3" Free-Angle LCD
- Micro 4/3 Lens Mount
- SD/SDHC/SDXC Card Slot
- Touch Screen Control for Stills/Video
- Dust Reduction System
- Dolby Stereo Sound with Video
- Fastest Level of Light Speed AF
- MEGA O.I.S. (Optical Image Stabilizer)

Kit with 14-42mm G Vario Lens..... #PADMCGH2K1

16 Mega Pixels

Panasonic Lumix DMC-GX1 Mirrorless System Camera

- 1080/60i HD Video Capture
- 3.0" Touch Enabled LCD
- Micro 4/3 Lens Mount
- Built-In Flash, Hot Shoe and Mode Dial
- SD/SDHC/SDXC Card Slot
- Movie iA and Creative Movie
- Lumix LightSpeed Focusing
- Super O.I.S. (Optical Image Stabilizer)
- Available in Black or Silver

*Kit with 14-42mm G Vario Lens.....#PADMCGX1KK**

16 Mega Pixels

SONY Alpha NEX-5N DSLR

- BIONZ Image Processor
- Tiltable 3.0" Touch LCD
- Accepts Sony E-Mount Lenses
- Up to 10 FPS Shooting
- 1080/60p HD Movie Capture
- SD/SDHC Card Slot
- Photo Creativity Touch
- Sweep Panorama
- HDMI Output
- Available in Black or Silver

Black with 18-55mm Lens.....#SONEX5NKB
Silver with 18-55mm Lens.....#SONEX5NKS

16 Mega Pixels

SONY Alpha SLT-A35 DSLR

- 3.0" Xtra Fine LCD with TruBlack
- Live View on LCD or EVF
- Sony A-mount Lens Mount (1.5x factor)
- MS/MS Pro & SD Media Slot
- HD 1080/60i Movies
- Built-In Pop-Up Flash
- RAW Image Capture

*Body Only.....#SOSLTA35**

16 Mega Pixels

SONY Alpha SLT-A77 DSLR

- Upgraded BIONZ Image Processor
- 2nd Gen Translucent Mirror Design
- OLED Electronic Viewfinder
- Swivel/Tilt 3.0" LCD Screen
- Uses Sony Alpha Lenses (1.5x factor)
- Built-In GPS
- Dual Media Slots
- 1080p HD Movie Capture
- SteadyShot INSIDE Stabilization

*Body Only.....#SOSLTA77V**

24 Mega Pixels

OLYMPUS

Flash System

FL-300R Flash	$169.95	FL-36R Flash	$229.95
FL-50R Flash	$499.95	RF-11 Ring Flash	$249.95
SRF-11 Ring Flash Set	$559.95		
TF-22 Twin Flash	$449.95		
STF-22 Twin Flash Set	$739.95		

Zuiko 4/3 System Digital Lenses

8/3.5 Fish-eye ED	$799.99
35/3.5 Macro ED (52ø)	$229.95
50/2.0 Macro ED (77ø)	$499.95
150/2.0 ED (82ø)	$2,499.95
300/2.8 ED	$6,999.95
7-14/4.0 ED (72ø)	$1,799.95
11-22/2.8-3.5 ED (72ø)	$799.95
12-60/2.8-4 ED SWD (72ø)	$999.95
14-42/3.5-5.6 ED (58ø)	$249.95
18-180/3.5-6.3 ED (62ø)	$499.95
35-100/2.0 ED (77ø)	$2,499.99
40-150/4-5.6 ED (58ø)	$279.95
50-200/2.8-3.2 ED SWD (67ø)	$1,199.95
90-250/2.8 ED (105ø)	$5,999.95
EC-14 1.4x Teleconverter	$439.95
EC-20 2x Teleconverter	$479.95
MF-1 OM Lens Adapter	$83.95

PENTAX

AF Flash System

AF-360FGZ	AF-540FGZ

SMCP-DA Digital AF Lenses

14/2.8 ED IF (77ø)	15/4.0 ED AL (49ø)
35/2.8 Mac. Limited (49ø)	55/1.4 Limited (58ø)
21/3.2 AL Limited "Pancake" (49ø)	
40/2.8 Limited "Pancake" (49ø)	
70/2.4 Limited "Pancake" (49ø)	
200/2.8 ED IF	300/4.0 ED IF SDM (77ø)
10-17/3.5-4.5 ED IF (77ø)	12-24/4 ED AL IF (77ø)
16-45/4 ED AL (67ø)	
16-50/2.8 ED AL IF SDM (77ø)	
17-70/4.0 AL IF SDM (67ø)	
18-55/3.5-5.6 AL II (52ø)	
50-135/2.8 ED IF SDM (67ø)	
50-200/4-5.6 ED WR (52ø)	
55-300/4-5.8 ED (58ø)	
60-250/4.0 ED IF SDM (67ø)	

AF Lenses for 35mm & Digital SLRs

31/1.8 Limited (58ø)	50/1.4 (49ø)
43/1.9 Limited "Pancake" (49ø)	
50/2.8 Macro (52ø) with Case	
77/1.8 Limited (49ø)	
100/2.8 D FA AW Macro (49ø)	

SONY

Compatible with Maxxum DSLRs

Flash System

HVL-F20AM	$149.99	HVL-F20S	$149.99
HVL-F43AM	$349.99	HVL-F58AM	$499.99

Digital Lenses

16/2.8 Fish-eye	$899.99	20/2.8 (72ø)	$649.99
24/2 Carl Zeiss (72ø)	$1,299.99		
35/1.4 G (55ø)	$1,399.99	50/1.4 (55ø)	$399.99
50/2.8 Macro (55ø)	$529.99		
85/1.4 Carl Zeiss (72ø)	$1,499.99		
100/2.8 Macro (55ø)	$749.99		
135/1.8 Carl Zeiss (77ø)	$1,599.99		
135/2.8 STF (72ø)	$1,299.99		
300/2.8 G APO	$6,299.99		
11-18/4.5-5.6 DT (77ø)	$699.99		
16-35/2.8 ZA SSM Carl Zeiss (77ø)	$1,899.99		
16-80/3.5-4.5 DT Carl Zeiss (62ø)	$849.99		
16-105/3.5-5.6 DT (62ø)	$649.99		
18-200/3.5-6.3 DT Aspherical (62ø)	$549.99		
18-250/3.5-6.3 DT (62ø)	$599.99		
24-70/2.8 Carl Zeiss (77ø)	$1,799.99		
70-200/2.8 G APO (77ø)	$1,999.99		
70-300/4.5-5.6 G (62ø)	$899.99		
75-300/4.5-5.6 (55ø)	$249.99		
1.4x Teleconverter	$499.99	2x Teleconverter	$499.99

expoimaging

Digital White Balance Filters

ExpoDisc is an easy to use custom white balance solution that eliminates the inconvenience and inconsistencies of other methods.

- Use in Ambient, Studio or Mixed Light
- Easy to Use, Durable, Compact

52mm - Neutral or Portrait	#EXWB52*	$69.95
58mm - Neutral or Portrait	#EXWB58*	$79.95
62mm - Neutral or Portrait	#EXWB62*	$84.95
67mm - Neutral or Portrait	#EXWB67*	$89.95
72mm - Neutral or Portrait	#EXWB72*	$94.95
77mm - Neutral or Portrait	#EXWB77*	$99.95
82mm - Neutral or Portrait	# EXWB82*	$104.95

OLYMPUS

50mm f/2 Macro ED Zuiko Digital Lens

- *Designed exclusively for Digital SLRs*
- Ideal for macro photography and also as a portrait lens
- Magnification 1:2
- ED glass element
- Min. focus: 9.45"
- 52mm filter diameter
- Weight: 10.6 oz

PENTAX

18-135mm f/3.5-5.6 ED AL (IF) DC WR Digital Lens

- *Designed exclusively for Digital SLRs*
- SP Coating Repels Dust, Water, & Grease
- Weather resistant
- Quick-Shift Focus System
- Min. focus: 1.3'
- 62mm filter diameter
- Weight: 14.3 oz

SONY

HVL-F58AM Shoe-Mount Digital Flash

- Zoom Head (24-105mm)
- Bounce & Swivel Head
- Guide No. 190'
- TTL Dedication
- Vari-Power
- High-Speed Sync
- Auto WB Adjustment
- Wireless Ratio Control
- Weight: 15.6 oz

SONY

16-80mm f/3.5-4.5 Carl Zeiss T* DT Digital Lens

- *Designed exclusively for Digital SLRs*
- Ideal for snapshots, portraits, interiors, or outdoor scenery
- 35mm equiv: 24-120mm
- Min. focus: 13.8"
- 62mm filter diameter
- Weight: 15.5 oz

B&H PHOTO - VIDEO - PRO AUDIO

The Professional's Source™

Over 300,000 products, at your leisure

www.BandH.com

800-947-9980
212-444-6666

Fax:
212-239-7770

Quick Dials

Digital SLR's and Accessories..... #64
Digital Point & Shoots and Accessories.....#61

We Buy, Sell and Trade Used Equipment

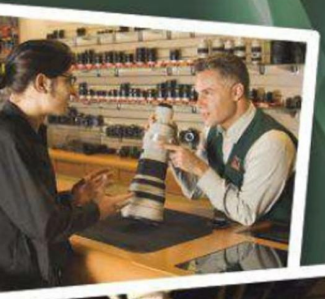
Store & Mail Order Hours:
Sunday 10-5 • Mon.-Thurs. 9-7
Friday 9-1 EST/9-2 DST
Saturday Closed

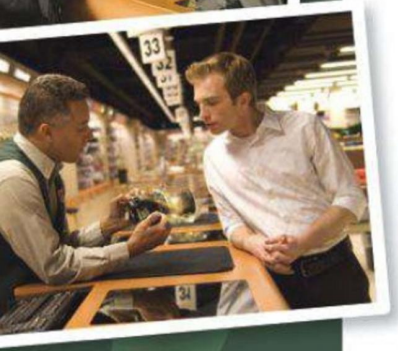
B&H PHOTO - VIDEO - PRO AUDIO

The Professional's Source™

When in New York, Visit our SuperStore

420 Ninth Ave.
Corner of 34th Street
New York, N.Y. 10001





- Over 70,000 square feet of the latest gear
- The most knowledgeable Sales Professionals
- Hands-on demos
- Convenient free parking available

Subscribe to our free Catalog
BandH.com/catalog
212-444-6633

Canon Digital Rebel T3 DSLR

- 2.7" Clear View LCD with Live View Function
- Uses Canon EF Lenses (1.6x factor)
- SDHC/SDXC Card Slot
- 3 fps Continuous Shooting
- ISO 100-6400
- Full HD Movie Mode
- RAW + JPEG Files
- Basic + Function / Creative Auto
- 63 Zone Dual-Layer System/9 Point AF

$50 REBATE!* Expires 3-3-12

*Kit with 18-55mm IS..... #CAEDRT3K ..... **$50 Rebate!***

12 Mega Pixels

Canon Digital Rebel T3i DSLR

- 3" Clear View Vari-Angle LCD
- Uses Canon EF Lenses (1.6x factor)
- SDHC/SDXC Card Slot
- 3.7 fps Continuous Shooting
- ISO 100-6400
- RAW + JPEG Files
- Full HD Movie Mode with Manual Exposure
- 63 Zone Dual-Layer System/9 Point AF

$50 REBATE!* Expires 3-3-12

Body Only..... #CAEDRT3I ..... —
*Kit with 18-55mm IS..... #CAEDRT3IK ..... **$50 Rebate!***

18 Mega Pixels

Canon EOS-60D DSLR

- 1920 x 1080 HD Video Capture
- DIGIC 4 Image Processor
- SD/SDHC/SDXC Card Slot
- Works with all Canon EF & EF-S Lenses • Vari-Angle Clear View 3.0" Flip-Out LCD
- HDMI Output to HDTV
- 5.3 fps Continuous Shooting
- ISO 6400 - Expandable to 12800

$100 REBATE!* Expires 3-3-12

*Body Only..... #CAE60D ..... **$100 Rebate!***
*Kit with 18-135mm IS..... #CAE60D18135 ..... **$100 Rebate!***
*Kit with 18-200mm IS ..... #CAE60D18200 ..... **$100 Rebate!***

18 Mega Pixels

Canon EOS-5D Mark II DSLR

- Record HD Video • 1080p Movie Mode
- Full-Frame Sensor • Live View Mode
- 3" High Resolution LCD Screen
- Uses Canon EF Lenses
- CF, MD Card Slot
- Dust and Weather Resistant
- Self-Cleaning Sensor
- 3.9 fps Burst Mode
- 9-point AF Sensor Array
- ISO Range 50-25600

$100 REBATE!* Expires 3-3-12

*Body Only..... #CAE5D2 ..... **$100 Rebate!***
*Kit with 24-105mm IS..... #CAE5D224105 ..... **$100 Rebate!***

21 Mega Pixels

Canon EOS-7D DSLR

- Record HD Video • 3" LCD
- Uses Canon EF Lenses
- CF, MD Card Slot
- Dust and Weather Resistant
- Selectable Video Exposure and Frame Rates
- ISO 100-6400 (expandable to 12800) • 8 fps Burst Mode
- 19-Point, All Cross-Type AF System

$100 REBATE!* Expires 3-3-12

*Body Only..... #CAE7D ..... **$100 Rebate!***
*Kit with 18-135mm IS..... #CAE7D18135 ..... **$100 Rebate!***
*Kit with 28-135mm IS..... #CAE7D28135 ..... **$100 Rebate!***

18 Mega Pixels

Canon EOS-1D Mark IV DSLR

- HD Video Recording
- Selectable Video Exposure + Frame Rates
- Self-Cleaning Sensor
- 3" LCD Monitor
- Uses Canon EF Lenses
- SD/SDHC & CF card slots
- 10 fps Burst Mode
- Dust and Weather Resistant
- 45 Point AF System
- High Sensitivity (ISO 102,400)

*Body Only..... #CAE1D4**

16 Mega Pixels

Canon SLR Lenses and Flashes

*** Double Rebates up to $500**

with purchase of lens or speedlight together with a qualifying DSLR camera body/kit.

- EOS-60D Body
- EOS-60D Kit with 18-135mm IS Lens
- EOS-60D Kit with 18-200mm IS Lens
- EOS-7D Body
- EOS-7D Kit with 18-135mm IS Lens
- EOS-7D Kit with 28-135mm IS Lens
- EOS-5D Mark II Body
- EOS-5D Mark II Kit with 24-105mm IS Lens

Expires 3-3-12

EOS Flash System (USA)

270EX..... 320EX..... ***$25 Rebate!****
270EX II..... ***$10 Rebate!**** 430EX II..... ***$20 Rebate!****
580EX II..... ***$30 Rebate!****
MR-14EX Ringlight..... ***$30 Rebate!****
MT-24EX Twin Flash.....

EF-S Lenses for Digital Only (USA)

(Not compatible with full frame cameras)

60/2.8 USM Macro (52ø)..... ***$40 Rebate!****
10-22/3.5-4.5 USM (77ø)..... ***$60 Rebate!****
15-85/3.5-5.6 IS USM (72ø)..... ***$65 Rebate!****
17-55/2.8 IS USM (67ø)..... ***$80 Rebate!****
17-85/4-5.6 IS USM (67ø).....
18-55/3.5-5.6 IS (58ø).....
18-135/3.5-5.6 IS (67ø).....
18-200/3.5-5.6 IS (72ø).....
55-250/4.0-5.6 IS USM (58ø).....

EF Lenses (USA)

24/2.8 (58ø)..... 28/2.8 (52ø).....
28/1.8 USM (58ø)..... 35/2 (52ø).....
20/2.8 USM (72ø).....
50/1.8 II (52ø).....
50/2.5 Macro (52ø).....
50/1.4 USM (58ø).....
MP-E 65/2.8 1x-5x Macro (58ø).....
85/1.8 USM (58ø).....
100/2 USM (58ø).....
100/2.8 USM Macro (58ø).....

EF Lenses (USA)

135/2.8 (52ø).....
28-135/3.5-5.6 IS USM (72ø).....
70-300/4-5.6 IS USM (58ø).....
70-300/4.5-5.6 DO IS USM (58ø)..... ***$90 Rebate!****
75-300/4.0-5.6 III (58ø).....
75-300/4.0-5.6 III USM (58ø).....

TS-E MF Lenses (USA)

17/4.0 "L".....
24/3.5 "L" II.....
45/2.8..... ***$100 Rebate!****
90/2.8..... ***$100 Rebate!****

EF "L" Lenses (USA)

14/2.8 USM II..... ***$160 Rebate!****
24/1.4 II (77ø)..... ***$120 Rebate!****
35/1.4 USM (72ø)..... ***$100 Rebate!****
50/1.2 USM (72ø)..... ***$120 Rebate!****
85/1.2 USM II (72ø)..... ***$150 Rebate!****
100/2.8 IS USM Macro (67ø)..... ***$70 Rebate!****
135/2.0 USM (72ø)..... ***$75 Rebate!****
180/3.5 USM Macro (72ø)..... ***$110 Rebate!****
200/2.8 USM II (72ø).....
200/2.0 IS USM (52ø).....

EF "L" Lenses (USA)

300/4.0 IS USM (77ø)..... ***$90 Rebate!****
300/2.8 IS USM II (52ø rear).....
400/5.6 USM (77ø)..... ***$90 Rebate!****
400/2.8 IS II (52ø rear).....
500/4 IS USM (52ø rear).....
600/4.0 IS (52ø rear).....
8-15/4.0 Fish-eye USM..... ***$100 Rebate!****
16-35/2.8 USM II (82ø)..... ***$110 Rebate!****
17-40/4.0 USM (77ø)..... ***$60 Rebate!****
24-70/2.8 USM (77ø)..... ***$100 Rebate!****
24-105/4 IS USM (77ø).....
28-300/3.5-5.6 IS USM (77ø).....
70-200/4.0 USM (67ø).....
70-200/4.0 IS USM (77ø)..... ***$100 Rebate!****
70-200/2.8 USM (77ø)..... ***$100 Rebate!****
70-200/2.8 IS II USM (77ø)..... ***$200 Rebate!****
70-300/4.0-5.6 IS USM (67ø)..... ***$100 Rebate!****
100-400/4.5-5.6 IS USM (77ø)..... ***$110 Rebate!****
1.4x II Teleconverter.....
1.4x III Teleconverter.....
2x II Teleconverter.....
2x III Teleconverter.....

Canon 580 EX II Shoe-Mount Flash — $30 REBATE!*

- Dust and water resistance
- Guide No. 190'
- Metal Hot Shoe
- E-TTL II, E-TTL, TTL & Manual
- Bounce and Swivel Head
- Zoom Head (24-105mm)
- Weight: 13.2 oz

Canon 10-22mm f/3.5-4.5 EF-S USM Digital Lens — $60 REBATE!*

- ***Designed exclusively for Digital SLRs***
- 35mm equivalent: 16-35mm
- Min. Focus: 9.5"
- 3 aspherical lens elements
- 3.5-27 f/Stop Range
- 77mm filter diameter
- Weight: 13.6 oz

Canon 24-70mm f/2.8 EF "L" USM Zoom Lens — $100 REBATE!*

- Sealed and gasketed against dust and moisture
- Internal Focusing
- UD Element
- Two Aspherical Elements
- 2.8-22 f/Stop Range
- Focus 1.25' to Infinity
- 77mm filter diameter
- Weight 33.6 oz

Canon 70-200mm f/2.8 EF "L" IS II USM Telephoto-Zoom Lens — $200 REBATE!*

- Improved Optical Image Stabilization provides up to 4 stops correction
- Min. Focus: 3.9'
- Dust & moisture resistant
- 77mm filter diameter
- Weight: 52.56 oz

Nikon 1 J1 Mirrorless Digital Camera

Exp. 2-25-12

** Available in Black only

- EXPEED 3 Dual Image Processor
- Interchangeable 1 NIKKOR Lens System
- 3.0" Anti-Glare Color LCD
- SD/SDHC/SDXC Card Slot
- Full HD (1080p) Movie Record Mode
- Motion Snapshot 1-Touch Photo Animation
- 10 fps Continuous Shooting in AF Mode
- Nikon Inc. limited warranty included

10 Mega Pixels

Available in Black, Red, Silver or White	Price	Less Rebate	Final Cost
Kit with 10-30mm VR** *#NI1J1**	$646.95	-$50	$596.95
Kit with 10mm & 10-30mm VR *#NI1J110**	$896.95	-$150	$746.95
Kit with 10-30 & 30-110mm VR *#NI1J11030**.	$896.95	-$150	$746.95

Nikon D3100 DSLR

Expires 2-25-12

- HD 1080p Video w/ Sound & Autofocus
- 3" LCD • Live View
- Uses Nikon AF Lenses (1.5x factor)
- SD/SDHC Card Slot
- 11-point Autofocus
- 3 Frames per Second Shooting
- ISO 100 to 3200 (Expand to 12800-Hi2)
- Self Cleaning Sensor
- Nikon Inc. limited warranty included

14 Mega Pixels

	Price	Less Rebate	Final Cost
Kit with 18-55mm VR *#NID31001855*	$646.95	-$50	$596.95

Nikon D5100 DSLR

Expires 2-25-12

- 1080p HD Movies with Full Time AF
- Uses Nikon AF Lenses (1.5x factor)
- 3.0" Vari-angle LCD
- SD/SDHC Card Slot
- ISO Sensitivity 100-6400
- In-Camera Special Effects Mode
- In-Camera HDR (High Dynamic Range)
- Fast 11-Point Autofocus System
- Nikon Inc. limited warranty included

16 Mega Pixels

	Price	Less Rebate	Final Cost
Body Only *#NID5100*	$746.95	-$50	$696.95
Kit with 18-55mm VR *#NID51001855*	$846.95	-$50	$796.95

Nikon D7000 DSLR

- EXPEED 2 Image Processor
- 1080p HD Video Capture
- RAW + JPEG Still Image Capture
- 3" LCD Monitor
- Accepts Nikon AF Lenses (1.5x factor)
- Twin SD/SDHC/SDXC Card Slots
- 39-point AF System
- RGB 3D Matrix Metering System
- i-TTL Flash + Speedlight Compatibility
- Nikon Inc. limited warranty included

16 Mega Pixels

Body Only #NID7000 ..... **$1,199.95**

Nikon D700 DSLR

- Self Cleaning Sensor • 5 fps Burst
- FX-format CMOS (full frame)
- 3" VGA LCD Monitor • Live View
- 51-point AF System
- Uses Nikon AF Lenses
- CompactFlash Card Slot
- Dust and Water Resistant
- Active D-Lighting Mode
- HDMI Video Out • ISO 6400
- Nikon Inc. limited warranty included

12 Mega Pixels

Body Only ..... *#NID700*
Kit with 24-120mm VR ..... *#NID70024120*

Nikon D4 DSLR

- RAW, TIFF, JPEG, RAW+JPEG Files
- FX-format (full-frame) CMOS Sensor
- 1080p HD Broadcast Quality Video
- EXPEED3 Image Processor
- 3.2" LCD Screen with Live View
- Compatible with Most Nikkor Optics
- Matrix, Center-Weighted, Spot Metering • 100-12800 ISO
- CF Type 1 & XQD Compatible
- Nikon Inc. limited warranty included

16 Mega Pixels

Body Only ..... *#NID3S* **$5,999.95**

Nikon SLR Lenses and Flashes

Instant Savings up to $200
on select DSLR's & lenses!
Expires 2-25-12

AF Flashes

SB-400		SB-900	
SB-700	**$326.95**	SB-910	**$546.95**
R1 Wireless Twin Flash			
R1C1 Wireless Twin Flash System			

DX ED-IF Lenses for Digital Only

10.5/2.8 Fish-Eye	
35/1.8 G AF-S (52ø)	**$196.95**
40/2.8 G AF-S Micro (52ø)	**$276.95**
85/3.5 G ED VR Micro (52ø)	
10-24/3.5-4.5 G AF-S (77ø)	
12-24/4 G AF-S (77ø)	
16-85/3.5-5.6 G AF-S VR (67ø)	
17-55/2.8 G AF-S (77ø)	
18-55/3.5-5.6 G AF-S II (52ø)	
18-55/3.5-5.6 G AF-S VR (52ø)	**$196.95**
18-105/3.5-5.6 G AF-S VR (67ø)	**$396.95**
18-200/3.5-5.6 G AF-S VR II (72ø)	**$846.95**
55-200/4-5.6 G AF-S (52ø)	
55-200/4-5.6 G AF-S VR (52ø)	$246.95
*Less -$100 Instant Savings***	*Final Cost* **$146.95**
55-300/4.5-5.6 G AF-S VR (58ø)	$396.95
*Less -$150 Instant Savings***	*Final Cost* **$246.95**

*** When purchased with D3100, D5100, D90 or D7000*

D-Type AF Lenses

14/2.8 D ED	
16/2.8 D (39ø) with Hood	
20/2.8 D (62ø)	
24/2.8 D (52ø)	
24/1.4 G AF-S ED (77ø)	
24/3.5 D ED PC-E (77ø)	
28/2.8 D (52ø)	
35/2.0 D (52ø)	
35/1.4 G AF-S ED (67ø)	
45/2.8 D ED PC-E Micro (77ø)	
50/1.8 D (52ø)	
50/1.8 G AF-S (58ø)	**$216.95**
50/1.4 D (52ø)	
50/1.4 G AF-S (58ø)	
60/2.8 D Micro (62ø) (1:1)	
60/2.8 G AF-S ED Micro (62ø)	
85/1.8 D (62ø) with Hood	
85/1.4 D IF (77ø)	
85/1.4 G AF-S (77ø)	
85/1.8 G AF-S (67ø)	**$499.95**
85/2.8 PC-E Micro (77ø)	
105/2.8 G AF-S ED-IF VR Micro (62ø)	
105/2.0 DC D with Hood (72ø)	
180/2.8 D ED-IF (72ø)	

D-Type AF Lenses

200/4 D ED-IF Micro w/Case (62ø)	
200/2 G AF-S ED-IF VR (52ø)	
300/4.0 D AF-S ED-IF (77ø)	
300/2.8 G AF-S VR (52ø-R)	
400/2.8 G AF-S VR ED (52ø)	
500/4.0 G AF-S VR ED (52ø)	
600/4.0 G AF-S VR ED (52ø)	
14-24/2.8 G AF-S ED-IF	**$1,996.95**
16-35/4.0 G AF-S ED VR (77ø)	
17-35/2.8 D AF-S ED-IF (77ø)	
24-70/2.8 G AF-S ED-IF (77ø)	**$1,886.95**
24-85/2.8-4.0 D IF (72ø)	
24-120/4.0 G AF-S ED VR (77ø)	**$1,296.95**
28-300/3.5-5.6 G AF-S ED VR (77ø)	
70-200/2.8 G AF-S ED-IF VR II (77ø)	**$2,396.95**
70-300/4.0-5.6 G (62ø)	
70-300/4.5-5.6 G-AFS VR (67ø)	**$586.95**
80-200/2.8 D with Collar (77ø)	
80-400/4.5-5.6 D VR (77ø)	
200-400/4 G AF-S ED VR II (52ø)	
TC-14E II (1.4x) Teleconverter	
TC-17E II (1.7x) Teleconverter	
TC-20E III (2x) Teleconverter	

Nikon 24-70mm f/2.8 G AF-S ED-IF Zoom Lens

- Optimized for edge-to-edge sharpness on both the Nikon FX (full-frame) and DX-format image sensors
- Rugged construction, dust and moisture resistance
- Minimum focus 1.2'
- 77mm filter diameter
- Weight 32 oz

Nikon 18-200/3.5-5.6 DX G VR II AF-S ED-IF Digital Lens

- *Designed exclusively for Digital SLRs*
- 35mm equiv. 27-300mm
- **VR II** Vibration Reduction
- SWM (Silent Wave Motor)
- 3.5-22 f/Stop Range
- Focus 1.6' to Infinity
- 72mm filter diameter
- Weight 19.8 oz

Nikon 70-200/2.8 G AF-S ED-IF VR II Telephoto-Zoom Lens

- **VR II** Vibration Reduction
- 3.5-22 f/Stop Range
- SWM (Silent Wave Motor)
- Close Focusing to 4.6'
- 77mm filter diameter
- Weight 3.2 lbs

Nikon SB-910 Speedlight i-TTL Shoe Mount Flash

- Tungsten & Fluorescent Filters Included
- Guide No. 111.5'
- Simplified Graphic User Interface (GUI)
- Bounce & Swivel Head
- Zoom Head (17-200mm)
- Wireless Controller
- Weight 14.8 oz

B&H PHOTO - VIDEO - PRO AUDIO
The Professional's Source™

Over 300,000 products, at your leisure
www.BandH.com

800-947-9980
212-444-6666
Fax:
212-239-7770

Quick Dials
Digital SLR's and Accessories..... #64

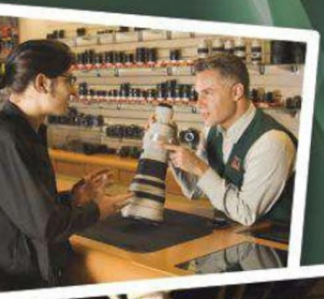
We Buy, Sell and Trade Used Equipment

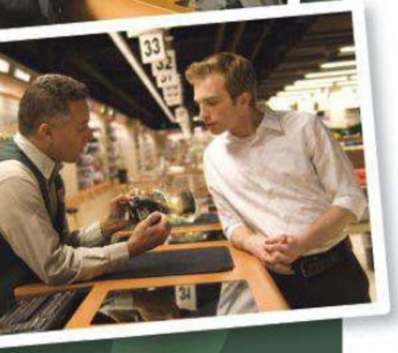
Store & Mail Order Hours:
Sunday 10-5 • Mon.-Thurs. 9-7
Friday 9-1 EST/9-2 DST
Saturday Closed

B&H
PHOTO - VIDEO - PRO AUDIO
The Professional's Source™

When in New York,
Visit our SuperStore

420 Ninth Ave.
Corner of 34th Street
New York, N.Y. 10001





- Over 70,000 square feet of the latest gear
- The most knowledgeable Sales Professionals
- Hands-on demos
- Convenient free parking available

Subscribe to our free Catalog
BandH.com/catalog
212-444-6633

TAMRON AF LENSES

Six-Year Warranty | **Manual Focus Lenses In Stock – Call for Prices**

Di for both digital and film SLR cameras • **Di-II** for Digital SLRs Only • **Di III** for mirror-less cameras Only

C = Canon N = Nikon P = Pentax SM = Sony/Minolta SE = Sony E Mount ** Price After Rebate

		SKU #	Available for	Rebate	Price
Di-II	60/2.0 LD IF Macro (55ø)	#TA602DI*	C, N, SM	$100	$424.00**
Di	90/2.8 Macro (55ø)	#TA9028M*	C, N, P, SM	$50	$449.00**
Di	180/3.5 LD IF Macro (72ø)	#TA18035*	C, N, SM	$50	$689.00**
Di-II	10-24/3.5-4.5 (77ø)	#TA102435*	C, N, P, SM	$50	$449.00**
Di-II	17-50/2.8 XR LD IF Aspherical (67ø)	#TA175028*	C, N, P, SM	$25	$474.00**
Di-II	17-50/2.8 XR VC LD IF Asph. (67ø)	#TA175028*Q	C, N	$50	$599.00**
Di-II	18-200/3.5-6.3 (62ø)	#TA1820035*	C, N, P, SM	$50	$249.00**
Di-III	18-200/3.5-6.3 VC (62ø) Black or Silver	#TA1820035S*	SE	—	$739.00
Di-II	18-270/3.5-6.3 VC (72ø)	#TA1827035*	N	—	CALL
Di-II	18-270/3.5-6.3 VC PZD (62ø)	#TA18270*	C, N, SM	$50	$599.00**
Di	28-75/2.8 XR (67ø)	#TA287528*	C, N, P, SM	$25	$474.00**
Di	28-300/3.5-6.3 XR LD (62ø)	#TA2830035XD*	C, P, SM	—	$419.00
Di	28-300/3.5-6.3 XR VC (62ø)	#TA2830035*	C, N	—	$629.00
Di	70-200/2.8 LD IF Macro (77ø)	#TA7020028M*	C, N, P, SM	—	$769.00
Di	70-300/4.0-5.6 VC USD (62ø)	#TA70300*	C, N, SM	$50	$399.00**
Di	75-300/4.0-5.6 LD (62ø)	#TA753004*	C, N, SM	—	$164.00
Di	200-500/5-6.3 LD IF (86Ø)	#TA2005005*	C, N, SM	—	$949.00
	1.4x SP AF Pro Teleconverter	#TA14XP*	C, N	—	$224.00
	2x SP AF Pro Teleconverter	#TA2XP*	C, N	—	$254.00

Tokina AF LENSES

DX – for Digital SLRs Only **FX** – Designed for full frame DSLRs ** Price After Rebate Exp. 3-31-12

** Also Available for Sony Alpha DSLR		Canon EOS	Nikon AF	Rebate	Price
DX	35/2.8 Pro Macro (55ø)	#T03528PDXC	#T03528PDXN	—	$299.00
FX	100/2.8 Pro D Macro (52ø)	#T010028PCAF	#T010028PNAF	—	$489.00
DX	10-17/3.5-4.5 ATX Fisheye	#T0101735CAF	#T0101735NAF	—	$669.00
DX	11-16/2.8 Pro (77ø) **	#T0111628PDXC	#T0111628PDXN	$40	$679.00**
DX	12-24/4.0 Pro II (77ø)	#T012244DXC	#T012244DXN	—	$599.00
FX	16-28/2.8 Pro	#T01628FXC	#T01628FXN	$50	$849.00**
FX	17-35/4 Pro (82ø)	#T01735F4FXC	#T01735F4FXN	—	$719.00

FLASHES

Metz

28 AF-3 TTL Digital Shoe Mount Flash	$108.00
28 CS-2 Digital Slave Shoe Mount Flash	$126.00
50 AF-1 TTL Shoe Mount Flash f/Canon or Nikon	$230.00
54 MZ-4 TTL Standard Shoe Mount Flash	$364.99
58 AF-2 TTL Shoe Mount Flash f/Canon or Nikon	$400.00
45 CL-4 TTL Handle Mount Flash**	$699.95
76 MZ-5 TTL Handle Mount Flash**	$1,024.99

** with battery and charger

QUANTUM

Q-flash TRIO	$875.00
Q-flash T5D-R	$706.00
Q-flash T5D-R with Turbo SC Battery & Charger	$1,172.00
Q-flash T5D-R with Turbo 3 Battery Kit	$1,303.50

Batteries

Battery 1 Compact			$118.00
Battery 1	$224.00	Turbo SC	$466.00
Turbo Blade	$466.00	Turbo 3	$624.00

SUNPAK

E-Flash Flat Panel Kit #SUFP38	$58.95
PF20XD Digital Slave Shoe Mount Flash	$38.95
RD-2000 Shoe Mount Flash	$64.95
PZ-4000 AF TTL Shoe Mount f/Canon, Nikon	$74.95
PZ-40x II AF TTL Shoe Mount	$69.95
PZ-42x AF TTL Shoe Mount for Canon, Nikon	$139.99
622 Super Pro TTL Handle Mount Flash	$196.95
622 Super Kit with Wide Angle Head	$199.95

Vivitar

285HV Professional Auto	$89.95
Pearstone SB-4 AC Adapter for 285HV #PESB4	$14.95

SIGMA AF LENSES & FLASHES

New! Instant Rebates up to $200 Expires 3-31-12 ** Price After Rebate

DC – for Digital SLRs Only • **DG** – Optimized for Digital SLRs

H – HSM Model with Canon, Nikon, Sigma
R – Rear Slip-in Gelatin Filter Slot

		Canon	Nikon	Pentax	Sigma	Sony	Rebate	Price
DC	4.5mm f/2.8 EX Circular Fisheye HSM R	#SI4528EXDCC	#SI4528EXDCN	#SI4528EXDCP	#SI4528EXDCSI	#SI4528EXDSO	—	$899.00
DG	8/3.5 EX Circular Fisheye R	#SI835CA	#SI835NA	—	#SI835SI	—	—	$899.00
DC	10mm f/2.8 EX Fisheye HSM R	#SI1028EXDCC	#SI1028EXDCN	#SI1028EXDCP	#SI1028EXDCSI	#SI1028EXDCSO	—	$649.00
DG	15/2.8 EX Diagonal Fisheye R	#SI1528DGCAF	#SI1528DGNAF	#SI1528DGPAF	#SI1528DGSA	#SI1528DGMAF	—	$609.00
DG	20/1.8 EX DF RF Aspherical (82ø)	#SI2018CAF	#SI2018NAF	#SI2018PAF	#SI2018SA	#SI2018MAF	—	$629.00
DG	24/1.8 EX DF Aspherical Macro (77ø)	#SI2418MCAF	#SI2418MNAF	#SI2418MPAF	#SI2418MSA	#SI2418MMAF	—	$549.00
DG	28/1.8 EX DF Aspherical Macro (77ø)	#SI2818MCAF	#SI2818MNAF	#SI2818MPAF	#SI2818MSA	#SI2818MMAF	—	$449.00
DC	30mm f/1.4 EX HSM (62ø)	#SI3014DCCAF	#SI3014DCNAF	#SI3014DCPAF	#SI3014DCSA	#SI3014DCMAF	—	$489.00
DG	50mm f/1.4 EX (77ø) H	#SI5014C	#SI5014N	#SI5014PE	#SI5014SI	#SI5014SOM	—	$499.00
DG	50/2.8 EX Macro (55ø)	#SI5028MDGCAF	#SI5028MDGNAF	#SI5028MDGPAF	#SI5028MDGSA	#SI5028MDGMAF	—	$369.00
DG	70/2.8 EX Macro (62ø)	#SI7028MDGCA	#SI7028MDGNA	#SI7028MDGPA	#SI7028MDGSA	#SI7028MDGSAQ	—	$499.00
DG	85/1.4 EX HSM (77ø)	#SI8514C	#SI8514N	#SI8514P	#SI8514SI	#SI8514S	—	$969.00
DG	105/2.8 EX Macro OS HSM (62ø)	#SI10528MDGCE	#SI10528MDGNQ	—	#SI10528MDGS	#SI10528MDGSM	$200	$769.00**
DG	150/2.8 EX APO Macro OS HSM (72ø)	#SI15028AMOC	#SI15028AMON	#SI15028AMOP	#SI15028AMSI	#SI15028AMOS	—	$1,099.00
DG	300/2.8 APO EX HSM	#SI30028DGCAF	#SI30028DGNAF	#SI30028DGPAF	#SI30028DGSA	#SI30028DGMAF	—	$3,399.00
DG	500/4.5 APO EX HSM	#SI50045DGCAF	#SI50045DGNAF	#SI50045DGPAF	#SI50045DGSA	#SI50045DGMAF	—	$4,999.00
DC	8-16/4.5-5.6 HSM	#SI8164556CA	#SI8164556NI	#SI8164556PE	#SI8164556SI	#SI8164556SO	—	$699.00
DC	10-20/4-5.6 EX HSM (77ø)	#SI102045DCAF	#SI102045DNAF	#SI102045DPAF	#SI102045DSA	#SI102045DMAF	—	$479.00
DC	10-20/3.5 EX HSM (82ø)	#SI102035C	#SI102035SN	#SI102035P	#SI102035SG	#SI102035S	—	$649.00
DG	12-24/4.5-5.6 EX Aspherical HSM	#SI122445C	#SI122445N	#SI122445P	#SI122445SI	#SI122445S	—	$949.00
DC	17-50/2.8 EX OS HSM (77ø)	#SI175028CA	#SI175028NI	#SI175028PE	#SI175028SI	#SI175028SO	$75	$594.00**
DC	17-70/2.8-4.0 OS Macro HSM (72ø)	#SI177028DCC	#SI177028DCNQ	#SI177028DCP	#SI177028DCSI	#SI177028DCSM	—	$469.00
DC	18-50/2.8-4.5 OS HSM (67ø)	#SI185028DOC	#SI185028DON	#SI185028DOP	#SI185028DOSG	#SI185028DOS	—	$199.00
DC	18-125/3.8-5.6 OS (Optical Stabilizer) (67ø) H	#SI18125350SC	#SI18125350SN	#SI18125350SP	#SI18125350SI	#SI18125350SS	—	$339.00
DC	18-200/3.5-6.3 IF Aspherical (62ø)	#SI1820035CAF	#SI182003563N	#SI1820035PAF	#SI1820035SA	#SI1820035MAF	—	$279.00
DC	18-200/3.5-6.3 OS II HSM (72ø)	#SI1820035CQ	#SI1820035NQ	—	#SI1820035SAQ	—	$100	$399.00**
DC	18-250/3.5-6.3 OS HSM (72ø)	#SI1825035C	#SI1825035N	#SI1825035CP	#SI1825035S	#SI1825035CSN	—	$479.00
DG	24-70/2.8 EX IF HSM (82ø)	#SI247028C	#SI247028NF	#SI247028PS	#SI247028S	#SI247028SM	—	$899.00
DC	50-200/4-5.6 OS HSM (55ø)	#SI5020045DOC	#SI5020045DON	#SI5020045DOP	#SI5020045DSG	#SI5020045DOS	—	$159.00
DG	50-500/4.5-6.3 APO OS HSM (95ø)	#SI505004563C	#SI505004563N	#SI505004563P	#SI505004563SA	#SI505004563SM	—	$1,659.00
DG	70-200/2.8 EX OS HSM (77ø)	#SI7020028CQ	#SI7020028NI	#SI7020028P	SI7020028SIQ	#SI7020028SOQ	—	$1,399.00
DG	70-300/4-5.6 DL Macro Super II (58ø)	#SI703004SCAF	#SI70300456N	#SI703004PAF	#SI703004SA	#SI703004MAF	—	$169.00
DG	70-300/4-5.6 APO Macro Super II (58ø)	#SI703004DGCA	#SI70300456AN	#SI703004DGPA	#SI703004DGSA	#SI703004DGMA	—	$239.00
DG	70-300/4-5.6 OS (62ø)	#SI7030045C	#SI7030045N	#SI7030045P	#SI7030045S	#SI7030045SM	—	$359.00
DG	120-300/2.8 EX APO OS HSM (105ø)	#SI12030028C	#SI12030028N	#SI12030028P	#SSI12030028SA	#SI12030028S	—	$3,199.00
DG	120-400/4.5-5.6 APO OS HSM (77ø Rear)	#SI120400C	#SI120400N	#SI120400PAF	#SI120400S	#SI120400MAF	—	$999.00
DG	150-500/5-6.3 APO OS HSM	#SI150500C	#SI150500N	#SI150500P	#SI150500S	#SI150500M	—	$1,069.00
DG	1.4x EX APO Tele-Converter	#SI1.4XDGCAF	#SI1.4XDGNAF	#SI1.4XDGPAF	#SI1.4XDGSA	#SI1.4XDGMAF	—	$249.00
DG	2x EX APO Tele-Converter	#SI2XDGCAF	#SI2XDGNAF	#SI2XDGPAF	#SI2XDGSA	#SI2XDGMAF	—	$299.00
DG	EF-610 ST	#SIEF610STC	#SIEF610STN	#SIEF610STP	#SIEF610STSI	#SIEF610STS	—	$165.00
DG	EF-610 Super Flash	#SIEF610C	#SIEF610N	#SIEF610P	#SIEF610SI	#SIEF610S	—	$255.00
DG	EM-140 TTL Ringlight	#SIEM140DGC	#SIEM140DGN	#SIEM140DGP	#SIEM140DGS	#SIEM140DGM	—	$379.00

SIGMA
18-200mm f/3.5-6.3 DC II OS HSM Digital Lens
- *Designed exclusively for Digital SLRs*
- Focus 1.5' to Infinity
- Mag. ratio: 1:3.8
- 72mm filter diameter
- Weight: 17.3 oz

$100 REBATE!

SIGMA
17-50mm f/2.8 EX DC OS HSM Digital Lens
- *Designed exclusively for Digital SLRs*
- Minimum focus: 11"
- Optical Image Stabilization (OS)
- 77mm filter diameter
- Weight: 19.9 oz

$75 REBATE!

TAMRON
60mm f/2.0 LD IF Macro Di-II Digital Lens
- *Designed exclusively for Digital SLRs*
- Minimum Focus 9.1'
- 55mm filter diameter
- Weight 14.1 oz

$100 REBATE!

Tokina
11-16mm f/2.8 Pro DX AT-X Fisheye Digital Lens
- *Designed exclusively for Digital SLRs*
- WR (Water Repellent) coating
- Minimum Focus 1'
- Magnification ratio 1:11.6
- Weight 1.2 lb

$40 REBATE!

VELLO™

FreeWave Wireless Remote

- 16 Million Possible Channels
- Operates on Radio Frequencies
- Direct Line of Sight Not Required
- Operating Range up to 320'
- Transmitter Can Fire Multiple Receivers
- Wireless Autofocusing and Triggering

for Canon with 3-Pin Connection #VERWC2	$37.95
for Canon, Pentax, Samsung, Contax #VERWC1	$35.95
for Nikon with 10-Pin Connection #VERWN1	$35.90
for Nikon with Mini-USB Connection #VERWN2	$35.49
for Panasonic #VERWC2PK	$45.00
for Olympus #VERWO2K	$36.95
for Nikon D90, D3100, 5000, 7000 #VERWN2K	$43.40
for Sony Alpha #VERWS1	$39.95

PHOTOGRAPHY ACCESSORIES

impact™

lighting equipment and accessories

LiteTrek 4.0 (LT) Series

Whether it's fashion, wedding or portrait photography, the best way to achieve professional-looking results in the field is by adding flash to the ambient light. The Impact Mini LiteTrek Battery Pack provides DC juice to your Impact LiteTrek 4.0 portable flash or select Nikon & Canon flashes with optional power cords as well as Quantum flashes without adaptation.

LiteTrek 4.0 DC Monolight
Flash Head #IMLTFH **$499.95**
LiteTrek 4.0 DC Monolight Kit
with Mini LiteTrek Battery Pack #IMMLTBK **$799.95**
LiteTrek 4.0 DC 2-Monolight Kit
with Mini LiteTrek Battery Pack #IMMLTBK2 .... **$1,299.90**

Mini LiteTrek (LT) Battery #IMMLTB **$199.95**
Mini LiteTrek (LT) Battery Pack #IMMLTPBP **$399.95**
Mini LiteTrek (LT) Pack & Charger Kit with CKE Nikon Cable #IMMLTPBPK1 .... **$439.95**
Mini LiteTrek (LT) Pack & Charger Kit with CZ Canon Cable #IMMLTPBPK2.... **$439.95**

Up to $450.00 Instant Savings on LiteTrek 4.0
(Expires 3-31-12)

LiteTrek Accessories

Charger for Mini LiteTrek #IMCBP... **$49.95**
IM-CZ Canon Flash Cable #IMCZ.... **$42.95**
Reflector Adapter (Bowens Adapter) #IMBAFH **$24.95**
IM-CKE Nikon Flash Cable #IMCKE **$42.95**
LiteTrek 4.0 Flash Tube #IMFTFH..... **$79.95**

B&H

PHOTO - VIDEO - PRO AUDIO

The Professional's Source™

Over 300,000 products, at your leisure

www.BandH.com

800-947-9980
212-444-6666

Fax:
212-239-7770

Quick Dials

Bag and Cases	#73
Tripods	#73
Filters	#73
Film/Processing	#71

We Buy, Sell and Trade **Used Equipment**

Store & Mail Order Hours:
Sunday 10-5 • Mon.-Thurs. 9-7
Friday 9-1 EST/9-2 DST
Saturday Closed

Page 7

FILTERS

SINGH-RAY Filters in stock

HOYA

B&H SPECIAL! Buy 3 or more Hoya Filters & Get 10% Off.

	52mm	58mm	67mm	72mm	77mm
UV, Skylight (1B)	$13.35	$19.95	$32.85	$34.35	$49.35
UV, Skylight (1B) HMC	$20.85	$23.85	$35.85	$43.35	$52.35
UV, Skylight (1B) Super HMC	$35.85	$44.85	$55.35	$65.85	$74.85
Linear Polarizer	$32.85	$35.85	$38.85	$44.85	$55.35
Circular Polarizer	$38.85	$43.35	$62.85	$74.85	$88.35
Circular Polarizer HMC	$77.85	$88.35	$103.35	$146.85	$179.85
"Moose" Warm Circular Polarizer	$55.35	$64.35	$92.85	$115.35	$137.85
K2 Yel, X0 Yel/Grn, Grn X1, Or G, Red 25A HMC	$25.35	$28.35	$41.85	$49.35	$61.35
Close Up Set (+1, +2, +4)	$50.85	$64.35	$77.85	$95.85	$104.85
Close-Up Set HMC (+1, +2, +4)	$65.85	$74.85	$98.85	—	—
Intensifier – Blue, Green Field, Enhancement (Red)	$44.85	$55.35	$70.35	$86.85	$104.85
Neutral Density 2x, 4x, 8x HMC	$25.35	$28.35	$41.85	$49.35	$61.35
Star 6, Star 8	$25.35	$28.35	$43.25	$49.35	$58.35

B+W

B&H SPECIAL! Buy 3 or more B+W Filters & Get 5% Off.

	55mm	58mm	67mm	72mm	77mm
UV	$21.00	$23.00	$33.50	$42.00	$47.50
UV Multi-Coated	$38.50	$38.50	$52.00	$64.50	$88.00
Circular Polarizer	$63.00	$65.00	$81.50	$93.50	$105.00
Circular Polarizer Multi-Coated	$90.00	$93.50	$117.00	$134.50	$160.50
81A, B, KR3, 6, 12, 15	$26.50	$26.50	$36.00	$42.00	$49.00
KB1.5, 3, 6, 12, 15, 20	$28.50	$28.50	$35.00	$40.50	$47.50
#021, 023, 041, 060, 061, 090	$24.50	$24.50	$36.00	$42.00	$49.00
Graduated (N.D. & Colors)	$46.50	$47.50	$58.50	$68.00	$82.50
ND .9, 1.8, 3.0, 4.0, 6.0	$42.00	$42.00	$67.50	$84.00	$94.50
Close-Up Lenses 0.25 – 5.0	$24.50	$24.50	$36.00	$42.00	$49.00

heliopan

Made exclusively with glass from Schott (Zeiss) the world's finest optical glass supplier.

	55mm	58mm	67mm	72mm	77mm
Skylight (1B), UV	$39.99	$41.99	$62.99	$77.99	$89.99
Skylight (1B), UV SH-PMC	$72.99	$78.99	$103.99	$131.99	$157.99
Circular Polarizer, Slim Circular Polarizer	$115.99	$121.99	$151.99	$180.99	$195.99
Circular Polarizer SH-PMC, Slim Circ. Pol. SH-PMC	$161.99	$171.99	$214.99	$242.99	$275.99
#5, #8, #11, #13, #15, #22, 81A, 81B, 81C	$49.99	$51.99	$78.99	$96.99	$108.99
Digital Filter	$176.99	$180.99	$222.99	$261.99	$301.99

TIFFEN

Ten -Year Warranty Made in USA — Multicoated Filter Technology

Digital Essentials Kits In Stock — *DIGITAL HT FILTERS*

	52mm	58mm	62mm	72mm	77mm
812 Warming	$64.95	$74.95	$99.95	$109.95	$129.95
Grad ND 0.6	$74.95	$84.95	$109.95	$119.95	$139.95
Circular Polarizer	$109.95	$129.95	$159.95	$199.95	$219.95
Ultra Clear	$49.95	$59.95	$69.95	$74.95	$79.95
Haze 86	$54.95	$64.95	$74.95	$84.95	$99.95
ND 1.2	$64.95	$74.95	$99.95	$109.95	$129.95
ND 0.6	$64.95	$74.95	$99.95	$109.95	$129.95
Soft FX3	$74.95	$84.95	$109.95	$119.95	$139.95
Star 4 pt 2	$64.95	$74.95	$99.95	$109.95	$129.95

FILM – B&W AND COLOR

COLOR PRINT

FUJIFILM

Superia
CA 200 135-24 ..... **1.99**
CH 400 135-24 ..... **1.99**

Pro
160S 220 Roll **7.95**
400H 135-36 ..... **6.49**
400H 120 Roll **4.99**

Kodak

Gold
GA 100 135-24 ..... **1.99**

Gold Max
GC 400 135-24 ..... **1.99**
GC 400 135-36 ..... **2.85**

Ektar
100 135-36 ..... **4.95**
100 120 Roll **3.99**

Portra
160 135-36 ..... **5.99**
160 120 Roll **4.79**
160 220 Roll **10.99**
160 220 PP (5) **54.95**
400 135-36 ..... **6.70**
400 120 Roll **4.99**
400 220 Roll **11.70**
400 220 PP (5) **58.50**
800 135-36 ..... **8.99**
800 120 Roll **6.99**

COLOR SLIDE

FUJIFILM

Fujichrome Professional Tungsten 64T
RTP II 135-36 ..... **11.59**

Velvia RVP
Pro 50 135-36 ..... **6.95**
Pro 50 120 Roll **5.99**
100F 135-36 ..... **9.95**
100F 120 Roll **4.59**

Provia
RDP 100F 135-36 ..... **6.49**
RDP 100F 120 Roll **3.79**
RXP III 400X 135-36 **10.99**
RXP III 400X 120 Roll **6.29**

Kodak

Ektachrome Professional E Series
100 VS 135-36 ..... **8.50**
100 VS 120 Roll **6.99**
100 G 135-36 ..... **8.50**
100 G 120 Roll **6.99**

BLACK & WHITE PRINT

FUJIFILM

Acros 100 135-36 ..... **4.25**
Acros 100 120 Roll **3.20**
Neopan 400 135-36 .. **4.50**

ILFORD
Pan F+ 50 135-36 ..... **5.49**
Pan F+ 50 120 Roll **4.49**
FP4+ 125 135-36 ..... **5.99**
FP4+ 125 120 Roll **4.25**
HP5+ 400 135-36 ..... **4.78**
HP5+ 400 120 Roll **3.89**

Delta Pro
100 135-36 ..... **5.69**
100 120 Roll **4.19**
400 135-36 ..... **5.95**
400 120 Roll **4.49**
3200 135-36 ..... **7.59**
3200 120 Roll **5.29**

XP-2 Super
400 135-36 ..... **6.09**
400 120 Roll **4.49**

Infrared
SFX 3200 135-36 ..... **7.19**
SFX 3200 120 Roll **7.50**

Kodak
Plus-X 125 135-36 ... **5.89**
Tri-X 400 135-36 ..... **3.99**
Tri-X 400 120 Roll **3.75**
TMX 100 135-36 ..... **5.50**
TMX 100 120 Roll **4.50**
TMY 400 135-36 ..... **5.09**
TMY 400 120 Roll **4.59**
TMZ 3200 135-36 ..... **7.19**
BW 400CN 135-36 ..... **5.95**

PROCESSING MAILERS

B&W 35mm **16.75**
B&W 120 Roll **16.75**

Print C41 35mm **13.49**
Print C41 120 Roll ... **15.49**
Print C41 220 Roll ... **30.95**

FUJIFILM

SLIDE
36 Exposures (35mm) .. **8.49**

check our website or call for up-to-the-minute prices & information! email your order or inquiry to us at: sales@beachcamera.com

BEACH CAMERA®

Where the Customer Always Comes First

800-634-1811

Toll-free Customer Service 800-634-1811 Dial 2
or email us at CS@beachcamera.com
Retail Showroom: 732-968-6400
203 Route 22 East Green Brook, NJ 08812
Now Shipping Internationally

Sunday . 10:00am-6:00pm Mon-Thurs 9:30am-7:00pm Friday 9:30am-2:00pm

All products are brand new, factory fresh and include USA warranty!

www.beachcamera.com

Corporate, School and Government purchase orders accepted! Fax to: (732) 424-5136

Corporate, School and Government purchase orders accepted! Fax to: (732) 424-5136

Digital SLR's

Canon

Rebel T3i

The REBEL on the Move

The next in a long line of phenomenal compact DSLRs, the EOS Rebel T3i continues the Rebel tradition of easy operation, compact design and no-compromise performance. It features the newest DIGIC 4 Image Processor and an 18.0 Megapixel CMOS Image Sensor - plus cutting-edge technologies like Full HD video recording, Live View shooting, Wireless flash photography and even a Vari-angle 3.0-inch LCD monitor.

OLYMPUS

PEN E-PL3

Innovative Vision NEW!

The E-PL3 might be small in size but it is certainly big on features. It promises all the razor-sharpness, background blur and vivid colors of a professional SLR despite being a fraction of the size. A brand new 12.3 MP sensor, an optimized image engine TruePic VI processor, a 3-inch tilt LCD and full HD Movie functionality are included along with much more. The E-PL3: So powerful it can capture everything. So small you can take it everywhere.

SONY

Alpha NEX-5N

Mini Marvel NEW!

Get a perfectly pocket-sized 16.1MP interchangeable lens camera made for capturing beautiful stills on the go at up to 10 frames per second. Record in Full HD 1080/60p or 24p video, take astonishing pictures in low-light with the large Exmor™ APS HD CMOS sensor or get beautiful panoramic shots in 2D or 3D. Put control at your fingertips with the highly responsive, conveniently tiltable 3.0" Live View touch screen LCD.

TAMRON

New eyes for industry

AF18-270mm F/3.5-6.3 Di II VC (Vibration Compensation) LD Aspherical (IF) Macro

The Longest Steadiest Lens on Earth

$50 Mail-In Rebate thru 4/30/12

The AF 18-270 covers an angle of view equivalent to that of a 28mm wideangle to a 419mm ultra telephoto with just one lens, letting the user capture once-in-the-lifetime images of panoramic landscape images or close-up pictures of children smiling, without having to get too close to the subject and without having to change lenses.

Camcorders

CALL OR LOG ON FOR CURRENT INSTANT REBATES AND PROMOTIONS

Canon imageANYWARE

Vixia HF M52 NEW!

Pro Image Quality with Compact Convenience

The VIXIA HF M52 camcorder has 32GB of internal memory to record up to 12 hours of stunning HD video. Built-in Wi-Fi™ means you can immediately upload video directly to YouTube™, Facebook™ or your own home computer. Upload video anywhere with your iPhone™, iPad™ or iPod Touch™, and enjoy wireless viewing on your DLNA™-compatible TV.

Vixia HF M500 NEW!

A brilliant blend of capability and convenience.

VIXIA HF M500 sports a pro-level Canon HD CMOS Pro Image Sensor and a Flat Touch Panel LCD. Intelligent IS and SuperRange Optical Image Stabilization designed for Canon's 10x HD Video Lens make every scene clear and steady, and new built-in features make it easy to give your videos added creativity.

XA10 Pro HD

The On-the-go Videographer's Dream

This feature-rich, professional model records Full HD 1080p to either its 64GB internal flash drive or 2 SDXC-compatible card slots. Including the ability to record simultaneously to both cards for instant backup. It includes a detachable handle for low-angle shooting and portability. A Genuine Canon 10x HD Video Lens delivers a wide, flexible zoom range (35mm equivalent range 30.4mm-304mm) and smooth, pleasing backgrounds.

Vixia HF R300

Express Yourself like Never Before

The VIXIA HF R300 is equipped with flexible features to suit your shooting and sharing needs. Superb imaging is ensured with Canon's 3.28 Megapixel Full HD CMOS Image Sensor and DIGIC DV III Image Processor. Full HD Video is steady and clear even at the large end of the 51x Advanced Zoom

We Carry Digital Cameras, Lenses, Flashes & Accessories, Camcorders, Printers, Scanners, External Hard Drives, Binoculars, Scopes, Television, Home Theater, DJ Equipment, Computers, Tablets, Car Electronics, Toys & Games, Sporting Goods, Housewares & so much more.

Canon · Nikon · SAMSUNG · SONY · Panasonic · hp invent · OLYMPUS · At the heart of the image · PENTAX · TAMRON · Lexar · CELESTRON · SanDisk · WD Western Digital · JVC · TOSHIBA · GoPro Be a HERO · YAMAHA · LG · FUJIFILM · Cuisinart · GARMIN · Kodak

All merchandise is brand new and factory fresh. Prices Are For Mail Order Only. 10% deposit required for COD orders. No restocking fee will be charged if merchandise is returned in pristine condition (returns are only subject to a 10% restocking fee if package is opened). Exchange or refund less shipping and handling within 15 days of receiving merchandise only if returned in original mint condition with original package and unfilled warranty cards. Please call 1-800-634-1811 Dial 2, for return authorization before returning product. Prices effective through end of monthly issue. Not Responsible for Typographical or Human Errors. All credit cards gladly accepted without any additional charges. New Jersey Resident add 6% Sales Tax. Prices are subject to verifiable manufacturer's price increases & decreases. Thank you for shopping with us. Fedex Saver shipping charges: minimum $9.95 under $100. Over $100 add $5.00 for every $500 increase. Caller or check website for further details. Ask for your shipping total. *Asterisk indicates price listed is after mfg's rebate. We appreciate your business every day! Prices Valid Thru Monthly Coverdate. Policy applies to all Beach Camera Advertisements. Shop on line 24 hours at our website www.beachcamera.com. Thank you for shopping with Beach!

HARBOR FREIGHT TOOLS

Quality Tools at Ridiculously Low Prices

LIFETIME WARRANTY ON ALL HAND TOOLS!

FACTORY DIRECT TO YOU!

How does Harbor Freight Tools sell high quality tools at such ridiculously low prices? We buy direct from the factories who also supply the major brands and sell direct to you. It's just that simple! See for yourself at one of our 370 Stores Nationwide and use this 20% Off Coupon on one of our 7,000 products*, plus pick up a Free 1" x 25 Ft. Tape Measure, a $5.99 value. We stock Shop Equipment, Hand Tools, Tarps, Compressors, Air & Power Tools, Woodworking Tools, Welders, Tool Boxes, Generators, and much more.

- Over 20 Million Satisfied Customers!
- 1 Year Competitor's Low Price Guarantee
- No Hassle Return Policy!
- 100% Satisfaction Guaranteed!

Nobody Beats Our Quality, Service and Price!

SUPER COUPON!

FREE!

WITH ANY PURCHASE

PITTSBURGH 1" x 25 FT. TAPE MEASURE

ITEM 47737/69080/69030/69031

Item 47737 shown

REG. PRICE $5.99

HARBOR FREIGHT TOOLS - LIMIT 1 Free item available with any purchase. Cannot be used with any other discount or coupon. Coupon not valid on prior purchases. Offer good while supplies last. Shipping & Handling charges may apply if free item not picked up in-store. Coupon cannot be bought, sold or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the offer. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

90515534

SUPER COUPON!

20% OFF

ANY SINGLE ITEM!

HARBOR FREIGHT TOOLS - LIMIT 1 Use this coupon to save 20% on any **one** single item purchased when you shop at a Harbor Freight Tools store. *Cannot be used with any other discount or coupon. Coupon not valid on any of the following: gift cards, Inside Track Club membership, extended service plans, Compressors, Generators, Tool Cabinets, Tool Carts, Welders, Floor Jacks, Campbell Hausfeld products, open box items, Parking Lot Sale items, Blowout Sale items, Day After Thanksgiving Sale items, Tent Sale items, 800 number orders or online orders. Coupon not valid on prior purchases after 30 days from original purchase date with original receipt. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store in order to receive the offer. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

23459946

SUPER COUPON!

6" DIGITAL CALIPER

PITTSBURGH

LOT NO. 47257

SAVE 66%

Includes two 1.5V button cell batteries.

$9.99 REG. PRICE $29.99

HARBOR FREIGHT TOOLS - LIMIT 7 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

42044674

SUPER COUPON!

MOVER'S DOLLY

LOT NO. 93888

HaulMaster

SAVE 46%

1000 LB. CAPACITY

$7.99 REG. PRICE $14.99

HARBOR FREIGHT TOOLS - LIMIT 8 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

66683749

SUPER COUPON!

PITTSBURGH

12" RATCHET BAR CLAMP/SPREADER

LOT NO. 46807/68975/69221

Item 46807 shown

SAVE 63%

$1.99 REG. PRICE $5.49

HARBOR FREIGHT TOOLS - LIMIT 8 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

44174069

SUPER COUPON!

400 WATT CONTINUOUS/ 800 WATT PEAK POWER INVERTER

CHICAGO ELECTRIC POWER SYSTEMS

LOT NO. 66814

SAVE 50%

$19.99 REG. PRICE $39.99

HARBOR FREIGHT TOOLS - LIMIT 6 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

99593731

SUPER COUPON!

RECIPROCATING SAW WITH ROTATING HANDLE

CHICAGO ELECTRIC POWER TOOLS

LOT NO. 65570

SAVE 50%

$19.99 REG. PRICE $39.99

HARBOR FREIGHT TOOLS - LIMIT 5 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

88025749

SUPER COUPON!

CHICAGO ELECTRIC POWER TOOLS

Item 68303 shown

OSCILLATING MULTIFUNCTION POWER TOOL

LOT NO. 68303/68861

8 Functions: Sanding, Cut Flooring, Cut Metal, Scrape Concrete, Remove Grout, Cut Plastic, Scrape Flooring, Plunge Cut

SAVE 68%

$18.99 REG. PRICE $59.99

HARBOR FREIGHT TOOLS - LIMIT 5 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

96495360

SUPER COUPON!

HFT

10 FT. x 10 FT. POPUP CANOPY

LOT NO. 68216

SAVE 31%

$54.99 REG. PRICE $79.99

HARBOR FREIGHT TOOLS - LIMIT 4 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

41757652

SUPER COUPON!

CENTRALPNEUMATIC

3 GALLON, 100 PSI OILLESS PANCAKE AIR COMPRESSOR

LOT NO. 95275

SAVE 50%

$39.99 REG. PRICE $79.99

HARBOR FREIGHT TOOLS - LIMIT 4 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

18699401

SUPER COUPON!

CHICAGO ELECTRIC WELDING

90 AMP FLUX WIRE WELDER

Item 68887 shown

SAVE $60

LOT NO. 68887/98871

NO GAS REQUIRED!

$89.99 REG. PRICE $149.99

HARBOR FREIGHT TOOLS - LIMIT 5 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

94201712

SUPER COUPON!

US★GENERAL

11 DRAWER ROLLER CABINET

INCLUDES:
- 6 Drawer Top Chest
- 2 Drawer Middle Section
- 3 Drawer Roller Cabinet

SAVE $150

$149.99 REG. PRICE $299.99

LOT NO. 67421

HARBOR FREIGHT TOOLS - LIMIT 3 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

86741850

SUPER COUPON!

PITTSBURGH AUTOMOTIVE

RAPID PUMP® 1.5 TON ALUMINUM RACING JACK

SAVE $60

3-1/2 PUMPS LIFTS MOST VEHICLES!

LOT NO. 68053

$59.99 REG. PRICE $119.99

HARBOR FREIGHT TOOLS - LIMIT 4 This valuable coupon is good anywhere you shop Harbor Freight Tools (retail stores, online, or 800 number). Cannot be used with any other discount or coupon. Coupon not valid on prior purchases after 30 days from original purchase date with receipt. Offer good while supplies last. Coupon cannot be bought, sold, or transferred. Original coupon must be presented in-store, or with your order form, or entered online in order to receive the coupon discount. Valid through 7/13/12. Limit one coupon per customer and one coupon per day.

44272075

370 Stores Nationwide

Order Online at HarborFreight.com and We'll Ship Your Order FedEx

The Last "Can of Air" You'll Ever Have To Buy!

New DataVac® Electric Duster,® the high-performance "green" alternative to throwaway "canned-air" camera/computer dusting products. All-steel, built to last, no condensation... ***Costs less than 5 "cans of air"!***

Call for info: 1-800-822-1602
www.DataVacElectricDuster.com

MADE IN USA BECAUSE IT MATTERS

METRO® *Family Owned Since 1939*

Metropolitan Vacuum Cleaner Co., Inc., Suffern, NY 10901

TURN YOUR PHOTOS INTO GREETING CARDS!

Step 1:
Simply peel adhesive liner and place photo behind window.

Step 2:
Fold to conceal back of photo.

Step 3:
You've just made a beautiful matted photo greeting card!

For personal use or as a business opportunity. Professional, quick and affordable in over 500 designs.

Contact us for a free catalog and sample.
10% off for first time customers.

PHOTOGRAPHER'S Edge
Your image | our frame | a lasting impression

www.photographersedge.com
800-550-9254

RELIABLE PHOTO, INC.

ONLY $11.95
20x30 or 20x24

From any Digital File or Negative!!!
Color corrected 4x6's only $0.29
Finishes available: matte, glossy, metallic & textured

We can convert your old 8mm to DVD

Digital Prints on Professional Photographic Paper

QTY.	5x7	8x10	11x14	16x20	20x24	20x30	30x40
1	.99	1.99	4.99	10.00	10.90	11.95	49.95
10	.90	1.75	4.75	9.79	10.75	11.75	47.95

Add $8.50 for S&H
522 W. Wise Rd., Schaumburg, IL 60193
847-673-1234
Order online! www.reliablephoto.com
reliablephoto@gmail.com

OMNI-BOUNCE

Used by Professionals around the world, to achieve soft natural lighting with most of the popular brand flash units. Ideal for wide angle shots, macro work, portraits and news coverage. Custom mounting with no Velcro required. Specify your strobe when ordering.

Only $19.95 + $2.50 shipping, Visa, MasterCard & AMEX

STO-FEN PRODUCTS
800-538-0730
P.O. Box 7609, Santa Cruz, CA 95061, USA
www.stofen.com

The ultimate in camera carrying comfort!

"I just LOVE it!"

Marina Cano
world renowned landscape and wildlife photographer
500px.com/marinacano

check out our latest, greatest product!

call us at 1.877.852.9423

cottoncarrier.com

The Acratech GP Ballhead

- *Weighs less than1 lb (.45kg)*
- *Solidly holds 25 lbs (11kg).*
- *Works as a Ballhead, a Gimbal Head and as a Panoramic head.*

Made in the USA.

www.acratech.net
(909) 392-7522

Jim Cline Photo Tours

Small Group Sizes!

Machu Picchu ~ Vietnam

India Pushkar Fair ~ Cuba

Day of the Dead ~ Myanmar

Angkor Wat ~ Guatemala

www.JimCline.com
877-350-1314

The Ultimate Digital Print

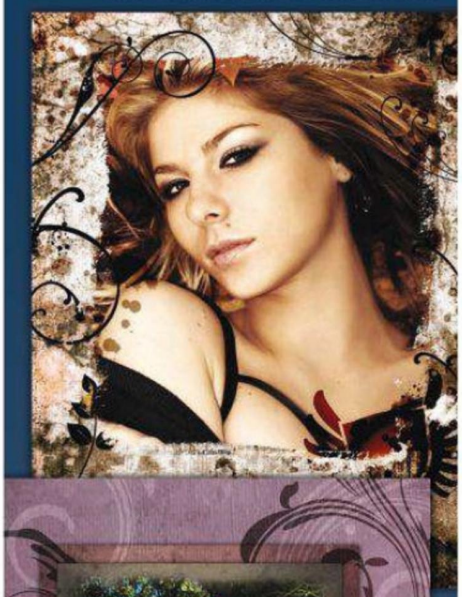
©Stuart Fall

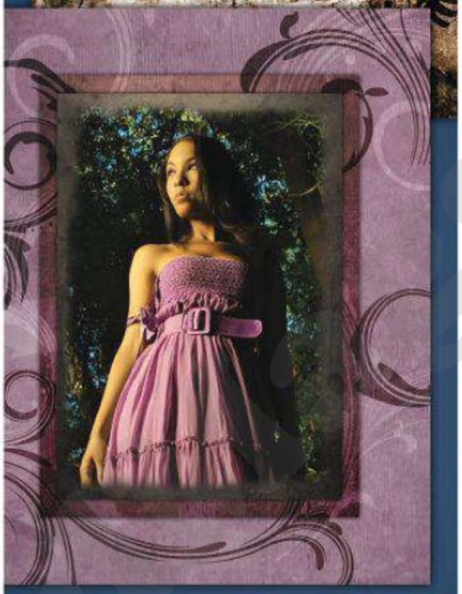
AutumnColor Luminage™

Realize the unlimited potential of each image! A fine arts lab, focused on customized jobs to meet the immediate needs of the artist, as well as insuring the archival life of prints. Visit us at **www.autumncolor.com** or call **800-533-5050**.

photobacks™

DIGITAL TEMPLATES, BACKDROPS & MORE





PREMIUM PACKAGE

385+ Photoshop Templates, Digital Backgrounds, Overlays, Actions and Video Tutorials!

Reg. Price: $119.95

YOUR PRICE! ONLY $59.46
with coupon below!

Fully customizable! Easy to use! Print at any lab!

15% OFF

Any order! At checkout use
COUPON CODE: POP433
current offers expire 4/30/12

www.photobacks.com

Photographer's Forum magazine and **SIGMA** present the

32nd ANNUAL SPRING PHOTOGRAPHY CONTEST

Over $8,000 in cash and equipment awarded!

FIRST PLACE GRAND PRIZE:
$2,000 cash award from **Photographer's Forum** PLUS Sigma 120-400mm lens

SECOND PLACE:
$1,500 cash award from **Photographer's Forum** PLUS Sigma 8-16mm lens

THIRD PLACE:
$1,000 cash award PLUS Manfrotto tripod

FOURTH PLACE:
Five $125 awards

100 HONORABLE MENTIONS:
All Honorable Mentions will be listed in the November 2012 issue of **Photographer's Forum** magazine and will receive a gold embossed certificate of outstanding merit from **Photographer's Forum.**

Visit Photographer's Forum at www.pfmagazine.com/pp

Visit SIGMA at www.sigmaphoto.com

PARTICIPATION GIFT:
2 Free Issues of Photographer's Forum Magazine to all entrants in the U.S. and Canada

- Rights remain with photographer.
- Subject matter is open.
- Finalists notified by July 30, 2012.
- Winners notified by Aug. 13, 2012.

WINNING PHOTOS
will be published in the November 2012 issue of **Photographer's Forum Magazine** and exhibited at Brooks Institute Gallery 27. All contest finalists will be published in the hardcover book, **Best of Photography 2012.**

FEES, DEADLINES
Early Entry fee is $4.95 per photo entered (postmarked or uploaded by **April 16, 2012**).

Regular Entry fee is $5.95 per photo entered (postmarked or uploaded by **May 14, 2012**).

ENTER ONLINE at: pfmagazine.com/pp

TO ENTER BY MAIL:
- Enter BW or color prints or slides. **Do not send disks.**
- Prints must be unmounted 9x12 or smaller.
- Label every photo with your name and address, and indicate which edge is the top.
- Make checks payable to Photographer's Forum.
- All entries must include payment, entry form, and photographs.
- Enclose a self-addressed, stamped envelope for return of work. Work will be returned after 8/31/2012.

Over $240,000 Cash Prizes Awarded Since 1980!

ENTRY FORM

❑ YES! I would like to enter the contest. I am enclosing $4.95 per photo entered (early entry date), or $5.95 per photo entered (final entry date). Please consider my work for publication in future issues of **Photographer's Forum** magazine. Please send me the next two issues of **Photographer's Forum** (US & Canada only).

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____ PHONE _____

E-MAIL _____

❑ Check or money order enclosed (U.S. funds only), made payable to Photographer's Forum.

❑ MASTERCARD ❑ VISA EXP. DATE _____

ACCOUNT NO. _____

CARDHOLDER SIGNATURE _____

Send all entries to **Photographer's Forum**, 813 Reddick Street, Dept. 1, Santa Barbara, CA 93103. **Photographer's Forum** reserves the right to publish all contest winners and finalists. Although caution will be exercised with all work, **Photographer's Forum** is not responsible for damage.

ARCA-SWISS monoball® p series

The leader of tripod head design for over 45 years creates a new revolutionary *K*nobless ballhead.
It's called *K*nobless because the traditional locking knobs have been removed.
Equipped with our patented (planetary) p-system, ARCA-SWISS **p** is a unique tripod head design that combines precision, ease of use, and a powerful, concentric, uniform locking force. Featuring our patented gravitational force compensation, sudden camera movements altering camera position are prevented. The ARCA-SWISS **p** is stylish, precise and strong, yet weighs under 10 ounces. A hand of steel in a velvet glove!

ARCA SWISS

ARCA-SWISS INC
Phone: 480 755-3364
E-mail: support@arca-swiss.com

---

jobu design

Lighter, Stronger, Stiffer.

The all new Jobu Pro2

Unsurpassed control of telephoto lenses.

MSRP $649USD/CAD

Made in Canada
www.jobu-design.com
Toll Free 1-888-321-JOBU (5628)

Leather Camera Case

FOR YOUR DIGITAL SLR • MADE IN U.S.A.

www.cameraholster.com

Skytop Trading, Estes Park Colorado
Phone: 970 - 577 - 0892

EVERYDAY
we print 100's of people's memories, lives, dreams, births, trips celebrations, houses, kids, dogs, cats, birds, and kitchen sinks.

18 x 24 Posters

our low everyday price of

$2.97 ea

shortrun posters.com

PLEASE NOTE: It is impossible for us to verify all the claims of advertisers, including product availability and existence of warranties. To confirm that an advertiser is authorized to sell a product, we suggest you contact the manufacturer directly.

WorldMags.net

www•CAMBRIDGEWORLD•com

New, Used, Refurbished, Preowned Collectables At Discounted Prices
We Buy, Trade, Export, Import Anything Photographic, Online Sales & Wholesale

1-800-221-2253 • 1-718-858-5002 • 1-212-675-8600

WE WILL BEAT AND MEET DISCOUNT PRICES!
CALL OR EMAIL US AND WE WILL SAVE YOU $$$$$$$$$$$$$$$$"

CAMBRIDGE WORLD — MORE THAN 50 YEARS OF EXPERIENCE
email: Sales@CambridgeWorld.com

"QUICK DELIVERY, ITEM WAS AS ADVERTISED, ARRIVED IN PERFECT CONDITION
JOHN SANOK INDIALANTIC, FL
Please see website for more testimonials.

DIGITAL & FILM CAMERAS

LENSES, FLASHES, SCREENS PAPER AND ACCESSORIES

Canon, Casio, Fuji, Hasselblad, Kodak, Leica, Mamiya, Nikon, Olympus, Panasonic, Pentax, Polaroid, Samsung, Sanyo, Sigma, Sony, Vivitar, Etc -

Memory Cards • Delkin, Kington, Lexar, SanDisk, Nikon0 Fuji, Olympus, Sony, Panasonic, Etc..... CALL

Large selection of BATTERIES available at discount prices....CALL

LARGE SELECTIONS OF NEW AND USED
CLASSIC CAMERAS

LENSES AND ACCESSORIES IN STOCK AT LOW DISCOUNT PRICES!

Agfa, Alpa, Ansco, Arca-Swiss, Bolex, Bronica, Canon, Contax, Contarex, Edixa, Exa, Exakta, Fuji, Fujica, Gami, Hasselblad, Kodak, Konica, Kowa, Leica, Leitz, Linhof, Mamiya, Mercury, Minolta, Minox, Miranda, Nikon, Nikonos, Olympus, Pentacon, Pentax, Petri, Plaubel, Polaroid, Praktica, Praktina, Retina, Revere, Ricoh, Robot, Rollei, Rolleiflex, Sea & Sea, Stereo Realist, Tessina, Topcon, Toyo, Voigtlander, Wollensak, Yashica, Zeiss, Etc

Apple iPhone 4 and 4S New iProlense Set

Includes:
* Wide Angle Lens Gives 35% Wider Field
* Fisheye Lens 165°
PanoramicLens
* Case with Tripod attachment.

Complete Set *ONLY!* ***$29.00***
TELEPHOTO LENS for the IPHONE...***$99.95***
NEW iPHONE color photo printer...***$159.95***
NEW all weather waterproof case to waterproof to 15ft for the iPHONE...***$39.99***

VIVITAR

NEW SERIES 1 LENSES

7mm F3.5.....324.95	13mm F2.8...409.95
35mm F1.4...499.95	85mm F1.4...324.95
500mm F8....107.95	500mm F6.3..169.95
650-1300 F8-16...299.95	
800mm F8.....239.00	

NEW FLASHES

16M.....19.95	DF 183 AF....44.95
DF 283 AF...89.95	285HV.....87.00
DF 293 AF...89.95	DF 383 AF...124.95
385 HV.....149.95	DF 483 AF...159.95

Free Shipping with any Vivitar Lenses or Flashes

LENSES

We Offer MORE THAN 1,000 DIFFERENT LENSES at LOW DISCOUNT PRICES!!!
Canon, Cosina, Nikon, Pentax, Olympus, Leica, Sony, Minolta, Vivitar, Schneider, Mamiya, Hasselblad, Rodenstock, Zeiss, etc.

SIGMA

Sigma SD15, SD10, SD9 SA7, SA9 .....CALL	
4.5mm F2.8.....838.95	50mm F1.4.....468.95
8mm F3.5.....828.95	50mm F2.8.....234.95
10mm F2.8.....598.95	70mm F2.8.....468.95
15mm F2.8.....568.95	105mm F2.8.....458.95
20mm F1.8.....588.95	150mm F2.8.....688.95
24mm F1.8.....498.95	180mm F3.5.....728.95
28mm F1.8.....308.95	300mm F2.8.....2998.95
30mm F1.4.....418.95	500mm F4.5.....4598.95
60mm F2.8.....278.95	10-20mm F4-5.6...478.95
400mm F5.6.....299.95	500mm F7.2.....399.95
85mm F1.4.....848.95	10-20mm F3.5.....598.95
800mm F5.6.....6698.95	17-70mm F2.8-4.5..458.95
12-24mm F4.5-5.6...848.95	18-200mm F3.5-5.6..238.95
18-50mm F2.8-4...188.95	18-250mm F3.5-5.6.448.95
18-50mm F2.8.....378.95	24-70mm F2.8.....878.95
18-125mm F3.8-5.6...318.95	**17-50mm F2.8**
8-16mm F4.5-5.6 DC...648.95	**EX DCOS HSM..648.95**
28-70mm F2.8-4....88.95	28-70mm F2.8.....318.95
28-200mm F3.5-5.6...174.95	28-300mm F3.5-6.3...234.95
35-135mm F4-5.6...99.95	50-150mm F2.8....698.95
50-200mm F4-5.6.148.95	55-200mm F4-5.6...124.95
50-500mm F4-6.3...948.95	70-300 F4-5.6.....148.95
70-200mm F2.8.....888.95	70-300mmDGOS.368.95
70-300 F4-5.6 APO...188.95	100-300mm F4-5.6...99.95
70-200mm	120-300mm F2.8..2698.95
F2.8 EX OS HSM...1298.95	150-500mm F5-6.3..989.95
100-300mm F4....1098.95	120-400 F4.5-5.6...938.95
200-500mm F2.8 APO EX DG.....25998.95	
300-800mm F5.6 EX BE HSM.....7698.95	
1.4X APO.....218.95	2X APO.....278.95

TOKINA

16-28mm F2.8 .....**849**	
35mm F2.8.....438.95	17-35mm F4.....719.00
10-17mm F3.5-4.5...444.95	100mm F2.8.....384.95
11-16mm F2.8.....564.95	28-200mm F3.5-5.6...99.95
12-24mm F4.....424.95	50-135mm F2.8....674.95
16-50mm F2.8.....594.95	80-400mm F4.5-5.6...638.95
16.5-135mm F3.5-5.6..424.95	

KENKO TELECONVERTER

1.4x..99.95 1.5x..84.95 2X..129.95 3X..219.95

SAMSUNG/ROKINON/BOWER

7.5mm F3.5...299.00 8mm F3.5....299.00 14mm F2.8....399.00
35mm F1.4....499.00 85mm F1.4....299.00 500mm F8...99.99
500mm mirror..119.99500mm F6.3..159.99 800mm F8...219.99
650-1300mm f8-16 Zoom Lens....279.99

LENSES FOR MOST MANUAL & AUTOFOCUS AF CAMERAS

8mm F3.5.....279.95	14mm F2.5.....398.95
24mm F2.8.....79.95	135mm F3.5.....29.95
28mm F2.8.....49.95	135mm F2.8.....49.95
35mm F2.8.....39.95	200mm F3.5.....79.95
50mm F1.8.....69.95	300mm F5.6.....99.95
50mm F1.4.....189.95	400mm F6.3.....99.95
85mm F1.4.....308.95	500mm F8.....99.95
100mm F3.5.....119.95	500mm F6.3.....124.95
800mm F8.....219.95	1000mm F11.....799.95
500mm 1000mm combination.....129.95	
19-35mm F3.5-4.5...149.95	28-80mm F3.5-5.6...79.95
28-105mm Zoom...99.95	28-210mm F3.5-5.6...99.95
28-300mm F4-6.3..169.95	35-105mm Zoom....119.95
70-210mm Zoom...79.95	75-150mm F3.5.....49.95
75-300mm F4.5 Macro Zoom Lens.....89.95	
100-300mm F5.6-6.7...99.95	100-500mm F5.6-8...395.95
650-1300mm F8 Long Zoom Lens.....249.95	
1000-4000mm zoom.....349.95	
1.4X Teleconverter.....99.95	
2X Teleconverter.....29.95	3X Converter...69.95
1.5X Teleconverter...69.95	1.7X.Converter..99.95
0.42X Fisheye Lens.....39.95	
0.45X Wide Angle Lens.....39.95	

TAMRON

14mm F2.8.....989.99	90mm F2.8.....348.95
28mm F2.5.....99.99	180mm F3.5.....628.95
24mm F2.5.....79.95	500mm F8.....198.95
11-18mm F4.5-5.6...434.95	17-50mm F2.8.....334.94
18-200mm F3.5-6.3...244.95	18-250mm F3.5-6.3...414.95
18-270mm.....548.95	19-35mm F3.5=4.5...159.95
20-40mm F2.7-3.5...298.95	24-135mm F3.5-5.6..398.95
28-105mm F2.8....298.95	28-200mm F3.8-5.6...118.95
24-70mm F3.3-5.6...89.95	28-75mm F2.8.....348.95
28-80mm F3.5-5.6...68.95	28-300mm F3.8-5.6..294.95
28-300mm F3.8-5.6 VC....584.95	200-400mm F5.6....298.95
55-200mm F4-5.6...128.95	75-300mm F4-5.6...128.95
70-200mm F2.8...664.95	200-500mm F5-6.3..758.95
60mm F2 Macro.....498.99	10-24mm F3.5-4.5...458.99
1.4X Converter....124.95	2X Tele Converter.....138.95
1.4X SP Converter...178.95	2X SP Converter...208.95

NEW SCHNEIDER PC TS LENSES

50/2.8 HM Super Angulon.....3498.99
90/4.0 HM Makro-Symmar.....3198.99
120/5.6 HM Aspheric Apo-Digitar.....4698.99

ASK

IF YOU DO NOT SEE IT, IT DOESN'T MEAN WE DO NOT HAVE IT,
1-800-221-2253

LEICA HEADQUARTERS!!!

Large selections of NEW & USED LEICA cameras, lenses, filters and accessories at low discount prices ASK for Joseph

NEW POLAROID INSTANT DIGITAL CAMERA
Print your pictures ***169.95***

Specials Of The Month

NEW TAMRON
70-210 F4-5.6 Marco Zoom Lens

with Shade
39.95

FILTERS

WE CARRY ONE OF THE WORLDS LARGEST SELECTION OF REGULAR AND SPECIAL EFFECT FILTERS IN A STANDARD AND SPECIAL SIZES, WE STOCK MORE THEN 5000 FILTERS AT LOW DISCOUNT PRICES

B+W, Heliopan, Hoya, Kenko, Promaster Cambron, Cokin, Sunpak, Tiffen, etc – CALL

Rollei & Rolleiflex Headquaters

* Large selsctions of new and used Rollei and Rolleiflex cameras,lenses and accessories at discount prices!!!!!
CALL WILLIAM at 1-800-221-2253

NOVOFLEX Adapters Lenses Accessories..... CALL

EXPOSURE LIGHT METERS
Cambron, Gossen, Kenko, Sekonic, Minolta, Pentax, Polaris, Shepard, Soligor, Spectra, Wein, Etc. - CALL

FLASHES
Canon, Cambron, Elinchrome, Gary Fong, Metz, Minolta, Multiblitz, Nikon, Norman, Novatron, Olympus, Pentax, Photogenic, Quantum, Sigma, Stroboframe, Smithvictor, Sunpak, Sony, Vivitar, Etc. CALL

PROJECTORS & VIEWERS
Canon, Braun, Epson, Kodak Carousel and Ektagraphic, Kaiser, Panasonic, Optoma, Sanyo, Sharp, Telex, Da-Lite Screens, Slide Mounts, Etc. CALL
Large Selection of Projector Lamps Bulbs are In Stock - CALL

DARKROOM / ENLARGERS
Beseler, Fujimoto, Durst, LPL, Omega, Etc.
Enlarging Lenses & Darkroom Accessories.
Large selection of papers available (Kodak, Ilford, Fuji, Forte, Etc.) - CALL

LARGE & MEDIUM FORMAT
Alpa, Arca Swiss, Bronica, Contax, Fuji, Cambron, Hasselblad, Linhof, Kiev, Mamiya, Rollei, Rolleiflex, Toyo, Wista, Yashica, Etc. CALL

TRIPODS
Arca Swiss, Bogen, Cambron, Cullman, Berlbach, Giottos, Davis & Sanford, Gitzo, Impact, Linhof, Manfrotto, Slik, Sunpak, Tiltall, Vanguard, Velbon, Etc. - CALL

FILM (ALL SIZES)
Kodak, Ilford, Fuji, Polaroid, Forte, Etc. CALL

PANORAMA
Fuji, Hasselblad XPAN, Horizon, Horseman, Linhof, Noblex, Silvestri, Widelux, Etc. CALL

CASES
Billingham, Domke, Lowepro, Pelican, Rimowa, Tamrac, Tenba, Zero Halliburton CALL

SELL TO US!!

WE PAY FOR YOUR RETIRED GEAR!

TOP DOLLAR$$$

Nothing is too Small or too Large Anything Photographic !!!!!
Estate Sales Welcome!!! You can mail your gear or we can pick your gear up. You can trade-in your gear or we will pay you with a check or with Paypal. CALL 1-800-221-2253 and ask for Simon Or Email us at sales@cambridgeworld.com
Send your equipment for a FREE evaluation to: Cambridge World 34 Franklin Ave., Brooklyn, New York 11205

TOP QUALITY EXPERIENCED **REPAIR** SERVICE
AT DISCOUNT PRICES!
Send your equipment for a FREE repair estimate to:
Cambridge World
34 Franklin Ave.,
Brooklyn, New York 11205

USED DEPARTMENT

We have more than 30,000 Used items. Email us your Wish Listat sales@cambridgeworld.com or CALL 1-800-221-2253 and we will assist you and SAVE you $$$$$$. No item is too small or large. Listing is very partial.

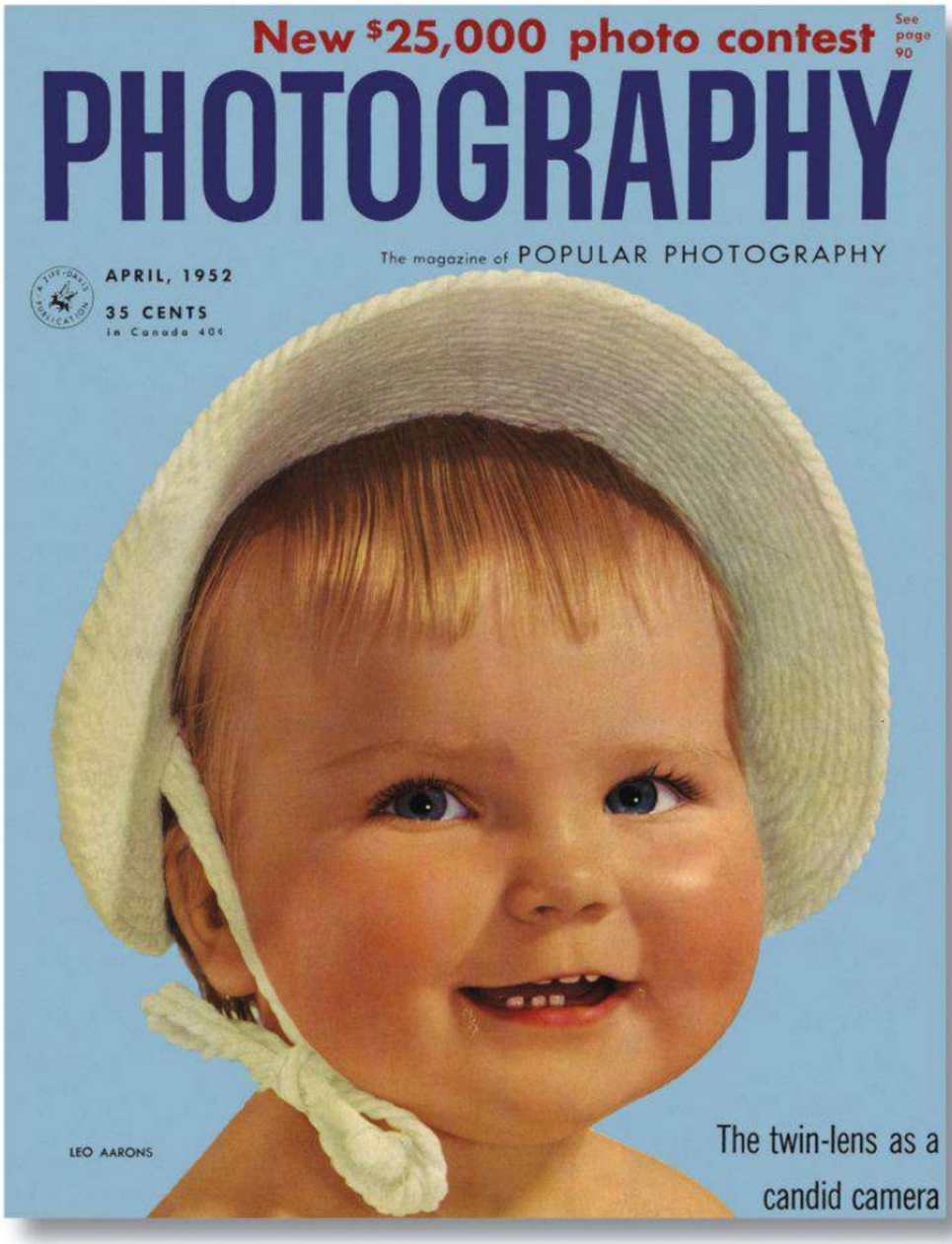
Bronica S2A, EC.....Call	Bronica GSI.....399.50	Canon 24mm F1.4 .....989.00	Olympus XA.....79.99
Bronica ETR.....99.95	Bronica SQ camera.....199.99	Canon 50mm F1.4 .....229.00	Minolta 160.....69.99
Canon A2E 79.99	Canon 1V.....499.99	Canon 85mm F1.2 .....1,299.00	Minolta 70.....49.99
Canon Elan 7E 49.99	Canon 1X.....69.99	Canon 300mm F2.8 ...2,199.00	Canon 120.....79.99
Canon rebel 2000.....89.99	Canon Elan.....69.99	Canon 16-35mm F2.8 ...889.00	Canon 105.....49.99
Canon F1.....119.99	Canon VT.....299.99	Canon 24-105mm F4 ....789.00	Leica minilux....199.99
Canon rebel XT.....299.99	Canon XTL 399.99	Canon 28-300mm F3.5 ...1,299	Contax T2.....199.99
Contax G2.....699.99	Contax N1.....349.99	Canon 70-200mm F2.8 ...1,199	Yashica T4.....99.99
Contax RTS III.....699.99	Exakta RTL.....149.99	Canon 100-400mm F4.5 1,199	Nikon life touch..49.99
Exakta VX.....99.99	Fuji Digital S3.....399.95	Canon 430EX 189.00	Konica 120.....49.99
Fuji S5 digital.....799.95	Exakta VX 1000.....129.50	Canon 580EX.....269.00	Nikonos II.....99.99
Hasselblad 500C...149.99	Hasselblad 503CW....499.95	Canon 24-70mm F2.8 ...899.95	Olympus 140.....49.99
Kodak Retina IIIc...99.95	Retina Reflex 99.99	50mm F1.4 Zeiss Planar...209.00	Pentax 115.....59.99
Leica IF.....499.99	Leica IIIG.....699.99	80-200mm F4 sonnar.....199.00	Minox GT.....199.99
Leica IIIF.....299.99	Leica M3.....499.99	Hasselblad 150mm F4 ..299.00	Rollei 35.....129.99
Leica R3.....199.99	Leica R8.....749.99	Leica 35mm F2 Summicron M...899	Canon rebel X.....49.99
Mamiya RB67.....199.99	Minolta X700.....99.99	Leica 50mm F2 Summicron M...399	Minota 7000.....39.99
Minolta XTi.....59.95	Maxxum 9000.....69.95	Leica 135mm F45 Hektor Screw..129	Petri V.....79.99
Maxxum 7000.....49.95	Maxxum 5000.....39.95	Leica 50mm F2 Summicron R..349.50	Exa.....69.99
Maxxum 9000.....69.95	Maxxum 700I.....119.95	Marniya 55mm F2.8 .....99.00	Praktica TL.....69.99
Maxxum 5D.....199.95	Maxxum 7D.....299.99	Marniya 180mm F4.5....149.00	Ricoh XRP.....99.99
Nikkormat FTN.....99.95	Nikkormat FT2.....119.94	Minolta 50mm F1.7.....19.00	Canon canonet.....49.99
Nikon F.....99.99	Nikon F2.....119.99	Minolta 80-200mm F4.5...69.00	Canon dial.....49.99
Nikon FA.....169.99	Nikon F100.....199.99	Minolta 5400HS.....79.00	Canon P.....239.99
Nikon F3.....129.99	Nikon FM10.....129.99	Maxxum 50mm F1.7 .....69.95	Hasselblad x-pan..999.99
Nikon F5.....349.99	Nikon D40.....199.99	Nikon 50mm F1.4.....69.00	Marniya 500 DTL....79.99
Nikon D200.....699.99	Nikon N55.....66.99	Nikon 18-200mm F3.5..349.00	Leica c-lux.....299.99
Nikon N90.....99.99	Nikon N8008.....79.95	Nikon 80-200mm F2.8 399	Leica CL.....499.99
Nikonos V.....179.99	Nikonos II.....79.95	Nikon SB600 .....269.00	Marniya 7.....699.99
Olympus OM1.....129.99	Olympus OM4.....179.99	Nikon SB900 .....349.00	Marniya 645E.....199.99
Pentax K1000.....99.99	Pentax LX.....299.99	Olympus 50mm F1.8 Zuiko...39.00	Marniya C220.....99.99
Pentax 645.....249.99	Rollei 35M.....119.99	Olympus 70-210mm F4.5.....99.00	Yashicamat.....129.99
Rolleicord V.....149.99	Rolleiflex F3.5.....499.99	Olympus 50mm F1.4.....99.95	Minolta 70.....59.99
Topcon super RE....249.99	Topcon UNI.....79.95	Panasonic 14-50mm F2.8...479.00	Minolta 9Xi.....149.99
Voigtlander Bessa...599.99	Vitomatic II.....99.95	Pentax 28-80mm F3.5.....39.00	Kodak C800.....49.99
Voigtlander Bessamatic...129.99	Vittrsa.....99.95	Pentax 35-80mm F4.....44.00	Samsung 170.....69.99
Yashica FX3.....69.99	Yashica FR1.....69.95	Sigma 70mm F2.8.....379.00	Pentax auto 110.....69.99
Zeiss Contarex.....299.99	Zeiss Icarex.....149.99	Sony 16-80mm F3.5.....499.00	Nikon F100.....169.99
Canon 5D.....1,499.00	Nikon 35Ti.....369.50	Sony 55-200mm F4.....99.00	Olympus IS.....79.99
Canon 40D.....699.00	Nikon FM 3A.....399.00	Vivitar 500mm F8 .....69.00	Miranda FV.....99.99
Contax Aria.....299.95	Nikon F4.....299.00	Vivitar 283 Flash.....29.95	Pentax PZ1.....109.99
Exakta 66.....999.99	Nikon D300.....1,099.00	2X Teleconverter Extended Lens..29.95	Contax Ila.....139.99
Leica M6.....999.99	Nikon D200.....499.00	3X Teleconverter Extended Lens..39.95	Contarex.....249.99
Minolta SRT 101.....69.95	Olympus E-520.....249.00		Nikon 35Ti.....299.50
			Nikon 28Ti.....349.95

BINOCULARS

TELESCOPES, RIFLESCOPES, RANGEFINDERS

We offer one of the Largest selections of BINOCULARS, TELESCOPES, RANGEFINDERS AND RIFLESCOPES at LOW DISCOUNT PRICES!!!
We also offer you more than 500 DIFFERENT BINOCULARS!!!!!!! BUSHNELL, BAUSCH&LOMB, CAMBRON, CANON, CARSON, CELESTRON, DOCTER, FUJI, FUJINON, JASON, KOWA,LEITZ, LEICA, LEOPOLD, MEOPTA, MINOLTA, MINOX, OLYMPUS, PENTAX, SAMSUNG, SPALDING, STEINER, SWIFT, TASCO, VANGUARD, VIVITAR, VIXEN, VORTEX, WEENS & PLATH, ZEISS, ETC... CALL

1-800-221-2253 • 1-718-858-5002 • 1-212-675-8600 **email: Sales@CambridgeWorld.com**



▲ Baby Boom

Our cover reverted to a favorite theme—cute kids—with this photo of Kathleen Greene, hat and all. The picture was taken by Leo Aarons, a leading advertising and magazine photographer. He shot in his studio using an 8x10 Deardorff view camera fitted with an 18-inch f/9 Zeiss Apo-Tessar lens. Electronic flash provided the lighting. The exposure on Kodak Ektachrome Daylight film was f/45 at 1/1000 sec, the duration of the flash itself.

60 YEARS AGO

We had TV star Mary Sinclair sit for five superstar shooters.

▼ Linhof's Happy Medium

Following the popularity of 2¼x3¼ press cameras, Linhof took the plunge with the Super Technika 23, possibly the most beautiful press-view camera ever built. Whatever could be put into a precision camera was, from a built-in coupled rangefinder and variable-view optical finder to a full range of view-camera movements and a choice of interchangeable lenses. The price? A luxurious $575, which included three Schneider lenses (wide-angle, normal, and telephoto). Multiply this price by at least 10 to come up with today's comparable cost.

▼ Combat Color the Hard Way

Lack of sophisticated lab equipment did not stop these Signal Corps photographers from processing Ansco Color film in the field. Members of a Signal battalion stationed in Korea, the cameramen figured out how to process the film under rugged field conditions. In this photo, Cpl. Lloyd Rule (right) keeps a watchful eye as Sgt. Ralph Pyle (left) sets the timer and Sgt. Joe MacConky (center) pours in the first developer.

▶ Candid Twin-Lens Camera

The handy twin-lens reflex is usually not thought of as a true candid camera, given its moderate lens speed (usually f/3.5) and the relatively slow "high-speed" (ISO 100) films of the time. But the imaginative photographer Ted Croner overcame these handicaps in this photo of top-hatted spectators at a horse show in New York. He used a 2¼ Rolleiflex and Kodak Super-XX film, push-processed in Dektol (a paper developer) to boost its EI to 800. —*Harold Martin*

OldMags.net

ADORAMA PRO IMAGING

Visit our new Pro Imaging Shop in New York City's stylish Chelsea!

Get expert, one-on-one advice from our staff of professionals

Take advantage of one-stop shopping with our pro lab and rental department

Get hands-on experience with the most exciting new photo and video gear

Scan and you can win $100!

ADORAMA
MORE THAN A CAMERA STORE

42 West 18th Street
New York, NY 10011
888-270-6151
www.adorama.com

GUARANTEED IN STOCK!!
If it's not in the store, we'll
SHIP FOR FREE!

WorldMags.net

ADORAMA
MORE THAN A CAMERA STORE

Adorama's Un-Beatable Service
CLICK BY 6 IT SHIPS
SAME DAY SHIPPING
ON ORDERS PLACED BY 7PM
MON-THU, FRIDAY BY 1PM EST
for details visit adorama.com

Vivitar® is back
Series 1 We make it Easy

$499.95
VIV-35mm

Ultra Fast Wide Angle Lens
Available for Canon® Nikon® Sony® Pentax®
35mm High Speed F 1.4

$34.90
VIV-RC-200

Wireless Shutter Release
Available for Canon® Nikon® Sony® Olympus®
Instant Release, Multi Exposure
2 Second Release, Long Exposure

STARTING AT
$19.95
VIV-VNDX

Variable NDX Fader Filter
Available from 37 mm to 82 mm
Adjustable From ND2 - ND1000
Create the Perfect Picture Everytime

$149.95
VIV-385-HV

Auto Aperture LCD Flash
Compatible with All Digital & Film Cameras
High Speed Synchronization
Thyristor Zoom

$94.95
VIV-1.4 X

1.4x TELE Converter
Available for Canon® Nikon® Sony® Pentax®
Mulitcoated Optical Glass
Increases Focal Length by 1.4x
For Telephoto SLR Lenses

STARTING AT
$59.95
VIV-DKS-18, 20, 25

SLR/Laptop Backpack
Available for 14", 15.4" & 17" Laptop
Double Sling Designed for the Traveler
Multiple Versatile Storage Compartments

SAME DAY SHIPPING on orders placed till 7:00pm on Mon-Thur, Friday on orders placed till 1:00pm for all in-stock items. FREE SHIPPING on thousands of items! Plus, Adorama protects you more than ever with our 30-DAY MONEY BACK guarantee! Shop with confidence and rest assured. For complete details, call 800.223.2500 or visit adorama.com

BBB ACCREDITED BUSINESS

SIGMA 18-200MM F/3.5-6.3 II DC OS HSM

CONTINUED FROM PAGE 86

the four tested focal lengths, and Slight-range pincushion distortion at the three other (longer) zoom settings. The new lens did the opposite: Three of four focal lengths produced less-than-desirable Visible-range distortion, and only one (200mm) rose to Slight. In its defense, the new version's 0.54% barrel distortion at 18mm, while rated Visible, nevertheless represents a best-in-class performance of comparable tested lenses.

Sigma's fall-off-free corners at three of four focal lengths and its maximum 1:2.63 subject magnification also won it best-in-class ribbons.

If you're shopping for an all-in-one, take a look at this Sigma. While it's slower at the long end compared to similar glass, it's significantly less expensive and in many ways optically superior.

—Julia Silber

SUBJECTIVE QUALITY FACTOR

Our standard lens test, SQF rates sharpness by print size

18 MM

Size	5x7	8x10	11x14	16x20	20x24
3.5	95.8	94.3	91.1	84.6	76.8
4.0	95.7	94.4	91.2	84.9	77.2
5.6	95.7	94.4	91.3	85.1	77.6
8.0	95.8	94.6	91.6	85.6	78.4
11.0	95.6	94.6	91.5	85.6	78.3
16.0	95.4	94.0	90.7	84.1	76.1
22.0	94.9	93.4	89.6	82.0	72.5

50 MM

Size	5x7	8x10	11x14	16x20	20x24
5.0	95.6	94.2	91.1	85.2	78.4
5.6	95.7	94.3	91.2	85.6	79.0
8.0	95.8	94.5	91.4	85.9	79.5
11.0	95.9	94.6	91.6	86.3	80.2
16.0	95.7	94.3	91.3	85.8	79.4
22.0	95.2	93.6	90.2	83.7	76.1
29.0	94.9	93.3	89.7	82.7	74.4

100 MM

Size	5x7	8x10	11x14	16x20	20x24
5.6	95.2	93.7	90.3	83.9	76.5
6.3	95.2	93.7	90.2	83.8	76.3
8.0	95.4	94.0	90.8	84.9	78.3
11.0	95.4	93.9	90.6	84.5	77.5
16.0	95.1	93.6	90.1	83.5	75.9
22.0	94.7	93.1	89.3	82.1	73.6
32.0	94.1	92.3	88.0	79.4	69.0

200 MM

Size	5x7	8x10	11x14	16x20	20x24
6.3	95.5	94.1	90.8	84.4	76.7
8.0	95.3	93.9	90.5	83.5	75.0
11.0	95.3	93.8	90.3	83.2	74.6
16.0	95.2	93.8	90.3	83.4	75.0
22.0	95.0	93.5	89.8	82.5	73.6
32.0	94.6	93.0	88.8	80.4	69.6
40.0	94.6	92.5	88.6	80.4	69.6

KEY A+ A B+ B C+ C D F

ADORAMA
MORE THAN A CAMERA STORE

adorama.com
42 West 18th St.
New York City, 10011
800.223.2500

Adorama's Un-Beatable Service
CLICK BY 6 IT SHIPS
SAME DAY SHIPPING
ON ORDERS PLACED BY 7PM MON-THU, FRIDAY BY 1PM EST
for details visit adorama.com

SLR Digital Cameras

Nikon

D5100

Digital SLR Camera (Body Only) delivers a galaxy of professional features in a consumer digital camera. A high-resolution 16.2MP DX format CMOS sensor and an EXPEED 2 image processing engine guarantee superb quality and high performance.

STARTING AT
$749.95

Canon

5D Mark II

Features a huge, full-frame sensor. A 21.1-megapixel CMOS sensor delivers images of up to 5616 x 3744 pixels. It is the first digital EOS to offer recording of Full HD video in Live View Mode. Capable of shooting clips almost half an hour long at full 1080 resolution

STARTING AT
$2499.99

PENTAX

K5

Go ahead and feed your photography obsession with the PENTAX K-5. For you, capturing that great shot isn't a casual interest. It's a part of your life. One spectacular image after another. This camera is the perfect piece of equipment to help you get your photo fix.

STARTING AT
$1599.95

SONY

A77

Step up to an incredible shooting experience

24.3MP, Translucent Mirror Technology, 12fps, OLED Electronic Viewfinder, Full HD Movie with AVCHD, 19-point Auto Focus.

OLYMPUS

E5

Built on our revolutionary E-System technology, the new Olympus E-5 adds powerful new features that let you do more than ever before. 12.3 Megapixel Digital SLR Camera Body, CF/SD Dual Slot, 3 Inch Swivel LCD

STARTING AT
$1699.99

SIGMA

SD-15

Powered by the 14-megapixel Foveon X3 direct image sensor, it can capture all primary RGB colors at each and every pixel location arranged in three layers. The camera adopts the SD card and incorporates a highly visible 3.0" LCD

$989.00

Lenses

Tokina

16-28MM F/2.8 ATX Pro FX

Exclusively for DSLRs, fast internal focusing

$849.95

Pro 300 AF Converters

Designed for use with 100mm telephoto or above, best w/200mm

TAMRON

18 - 270mm f/3.5-f/6.3 DI-II VC

PZD Piezo Drive Ultrasonic Motor Aspherical (IF) AF Zoom with Macro

$649.99

TIFFEN Digital HT™

Digital HT™
A Major Breakthrough in Multi-Coated Filter Technology

Tiffen's Digital HT filters are available as:
- Digital Ultra Clear™
- Haze 86 (with 86% UV absorption)
- Circular Polarizer
- 812® Warming Filter
- ND 0.6
- ND 1.2
- Soft/FX® 3
- Star 4 Point 2
- Color-Grad® ND 0.6

In sizes 52mm-82mm with distinctive soft pouch for storage.

SIGMA

150-500mm

f/5-6.3 DG APO OS HSM AutoFocus Telephoto Zoom Lens

$1069.00

17-50mm f/2.8 EX DC OS HSM

Auto focus wide angle zoom lens for portraiture & landscapes

$669.00

70-200mm

f/2.8 EX DG OS HSM Auto Focus Telephoto Zoom Lens

$1399.00

Cases & Bags

thinkTANKphoto

Retrospective 5 Shoulder Bag

Created for the professional photographer

$129.00

Lowepro

Fastpack 250

Digital SLR & Widescreen Notebook Backpack, Water Resistant

$99.00

Manfrotto

Stile Bella

MBSSB-6SW VI Shoulder Bag for DSLR with Up to 70-200mm Lens,

$49.99

ADORAMA tv
Watch. Learn. **Create.**
4 shows, new episodes daily (M-Th):
adoramatv.com

Adorama Pix
The source for the finest quality digital prints, photobooks and more:
adoramapix.com

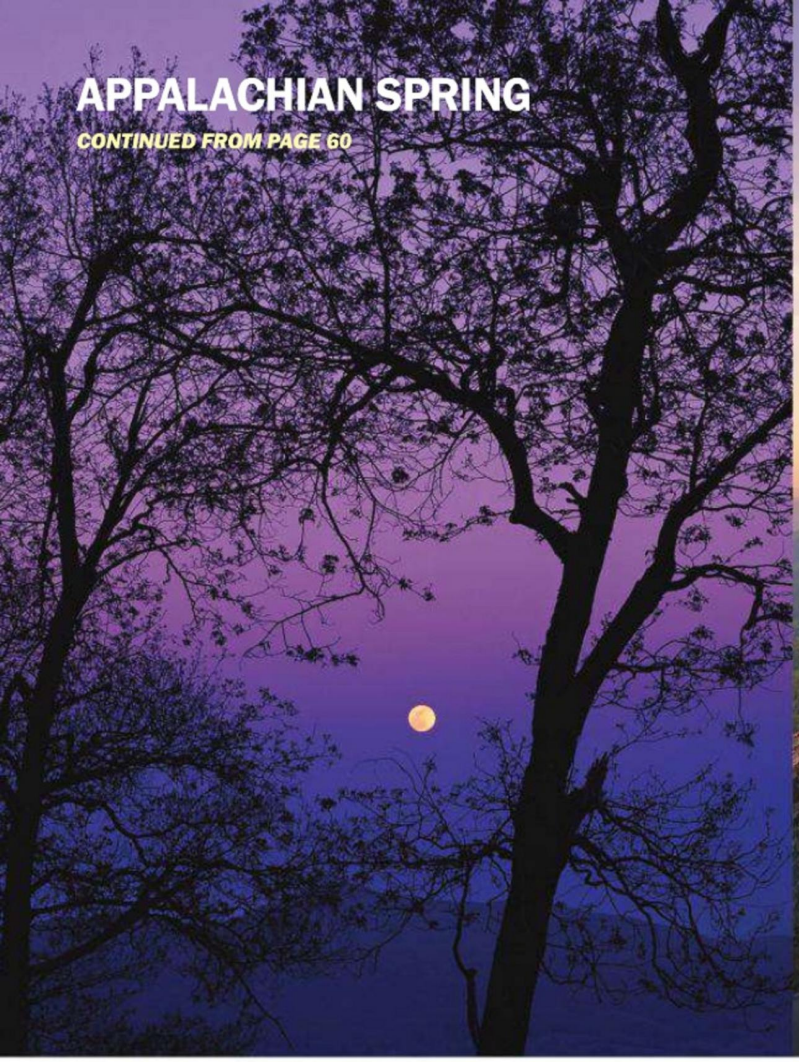
Used & Trade
Paying top dollar for your used equipment, get an instant online quote at:
adorama.com/sell

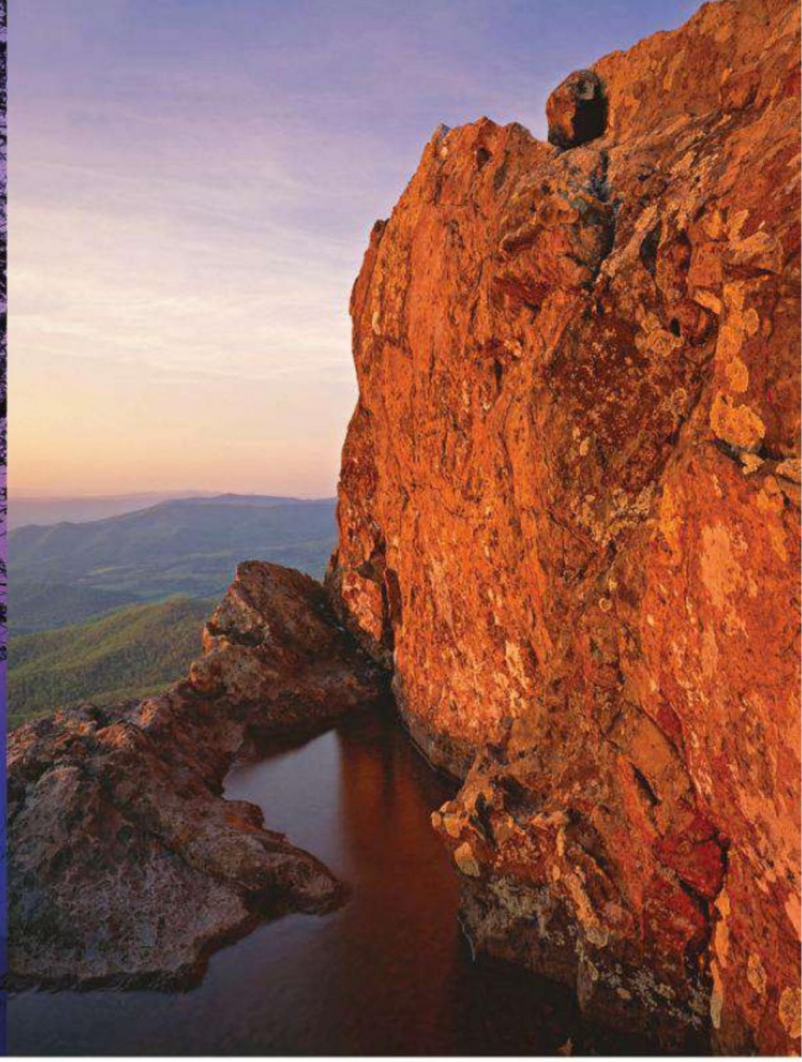
Learning Center
Video tutorials, how-to's, interviews and reviews for photographers of all levels:
adorama.com/ALC

WorldMags.net

APPALACHIAN SPRING

CONTINUED FROM PAGE 60





The Blue Ridge Parkway ends in North Carolina at US 441, but your photo adventure goes on: Turn right and head into the Great Smoky Mountains!

Great Smoky Mountains

At America's most-visited national park, you'll find ridge upon ridge of ancient mountains straddling the border between North Carolina and Tennessee. The park is renowned for its biodiversity, beautiful scenery, and historic sites. Spring usually reaches lower elevations during the second or third week of April; higher elevations might not see any sign of spring until early May.

Once again, you will find no shortage of photogenic subjects. (I recommend *The Smoky Mountains Photographer's Guide* by Bill Campbell and Nye Simmons to learn more.) Here are just a few of the must-see destinations.

A spur road at the top of the Appalachian Crest on U.S. 441 brings you eight miles up to the top of Clingmans Dome, offering exceptional views of the Smokies and the surrounding landscape. Hike the steep, paved trail to the observation deck at the summit for superlative 360-degree panoramic views. The dome is best photographed when clouds fill the valleys below.

Also popular among photographers: the Tremont area near Townsend, TN, just off Laurel Creek Road. Take the spur road toward the Great Smoky Mountains Institute, go past the turn for this, and continue following the Middle Prong of the Little River. Stop along the way to shoot budding trees, flowering dogwoods, and rushing spring waters.

Cades Cove, at the western end of Laurel Creek Road and circled by an 11-mile one-way loop road, is a magical journey back in time, offering excellent photo opportunities for wildlife, scenic, and historic sites. A broad valley surrounded by mountains, the landscape is dotted with antique buildings—remnants of a flourishing small town—including three churches, a working grist mill, barns, and log houses.

If you can, photograph Cades Cove early in the morning when mist clings to the valley floor. At certain times of the year, the loop road is closed to motor traffic in the mornings; otherwise it is open from sunrise until sunset daily, weather permitting. Inquire with the National Parks Service for the most up-to-date information.

FULL MOON
BLUE RIDGE PARKWAY, VA
Plant shot trees silhouetted against the spring sky with a K.B. Canham DLC45 view camera and 300mm f/9.0 Nikkor M lens; exposure on Fujichrome Velvia not recorded.

LITTLE STONY MAN CLIFFS
SHENANDOAH NATIONAL PARK, VA
The southern Appalachians offer plenty of craggy summits. Plant used the Canham DLC-45 with a 90mm f/4.5 Nikkor-SW lens; exposure on Velvia not recorded.

Ian Plant (ianplant.com) is a professional nature photographer, writer, and adventurer. His work appears in numerous books and calendars, as well as ebooks and video tutorials.

WorldMags.net

ADORAMA
MORE THAN A CAMERA STORE

adorama.com
42 West 18th St.
New York City, 10011
800.223.2500

Adorama's Un-Beatable Service
CLICK BY 6 IT SHIPS
SAME DAY SHIPPING
ON ORDERS PLACED BY 7PM MON-THU, FRIDAY BY 1PM EST
for details visit adorama.com

Point & Shoot Digital Cameras

P7100
10.1 Megapixel Digital Camera with 7.1x Optical Zoom, 4x Digital Zoom, 3 inch LCD Display, 5-way VR Image Stabilization System Compact, high-performance digital camera offers superb image quality and precise imaging control

Nikon

PowerShot S100
12.1 Megapixels Digital Camera with 5x Optical Zoom, 24mm Wide Angle Lens, Face Detection Technology & Smart Shutter Best Image Selection 3in LCD Color Display

Canon

GXR
Interchangeable Unit Body with Ricoh Lens P10 28-300mm f/3.5-5.6 VC Camera Unit, 10 Megapixel

GXR Interchangeable Unit Camera System features the world's smallest and lightest digital camera with inter-chanegable lens capability

RICOH

Vivitar
Vivicam 8225
8MP Digital Camera, SD Card Support, 2X Optical, 8x Digital Zoom, 2.4" TFT Screen

PENTAX
Optio WG-1
with GPS Kit - 14 Megapixel, Waterproof, Dust/Cold/Shock-Proof

Kodak
EasyShare Max Z990
12MP, 30x Schneider-Lens, 3 inch HVGA High Resolution LCD, HD Video

SAMSUNG
MV800 MultiView
16.1 Megapixels Digital Camera with 5x Optical Zoom 26mm wide angle Schneider lens

CASIO
EX-ZR100 HDR-ART High Speed
12.1 Megapixels, 12.5x Optical Zoom, 3 inch LCD, HD 1080p

Panasonic
DMC-LX5
10.1MP Digital Camera with 3.8x 24mm Wide-angle Leica optical zoom

Digital Picture Frames

Kodak
Pulse 10.4"
with 512 MB Internal Memory, 4:3 Aspect Ratio, Photo Frame: 11" × 13" × 1.5"

SONY
DPF-XR100
10.2 inch with 16:10 Aspect Ratio LCD, Up to 4,000 Images, USB Input, AVCHD/MP4

PANDIGITAL
Panimage
10.1" Digital Photo Frame - Black & White Interchangeable Mats

Multimedia Digital Storage

EPSON
Storage & Viewer
with USB 2.0 & 4" LCD P3000 40 GB

HYPERDRIVE
THE DRIVE FOR MORE
Storage & Viewer
with 3.2" LCD, Supports 11 Memory Card Formats Available 120, 160, 250, 320, 500GB

NEXTODI
ND 2730 Photo Storage
Backup & preview photos anywhere! 500/750GB. Firewire 800 & USB 2.0 Slots for CF/ SDXC/SDHC

Software

Complete Collection

Adobe
Photoshop Lightroom 3

Adobe
CS5.5 Design Premium

DXO · TECHNOLOGY · datacolor · DPfolio · DARKROOM · x-rite · PHASEONE

SAME DAY SHIPPING on orders placed till 7:00pm on Mon-Thur, Friday on orders placed till 1:00pm for all in-stock items. **FREE SHIPPING** on thousands of items! Plus, Adorama protects you more than ever with our **30-DAY MONEY BACK** guarantee! Shop with confidence and rest assured. For complete details, call 800.223.2500 or visit adorama.com

Store Hours
Sunday 9:30am - 5:00pm
Mon-Th 9:00am - 8:00pm
Friday 9:00am - 2:00pm
Saturday Closed

BBB ACCREDITED BUSINESS

WorldMags.net

ADORAMA
MORE THAN A CAMERA STORE

Adorama's Un-Beatable Service
CLICK BY 6 IT SHIPS
SAME DAY SHIPPING
ON ORDERS PLACED BY 7PM
MON-THU, FRIDAY BY 1PM EST
for details visit adorama.com

Professional Video

Canon
$7499.00
CAXF305

XF-305
High Definition Pro Camcorder, CF Card Media, 18x HD L-Series Zoom, HD-SDI Output, Genlock and SMPTE Time Code Terminals. Ideally suited to match the requirements of journalists and film-makers on the go.

Panasonic
$2825.00
PCAGHMC150

AG-HMC150
The Industry's Next Generation Affordable HD Professional 3-CCD Handheld AVCCAM Camcorder, with a Leica 13x Wide-Angle Optical Zoom, 3.5" LCD Monitor, SD/SDHC Memory Card Slot AVCHD.

HD Camcorders

SONY
NEX-VG10
HD Interchangeable Lens Handycam Camcorder

SAMSUNG
HMX-H304
Full HD 16GB Camcorder, 30x Optical Zoom, 3.0 inch Wide Touch Screen LCD

Panasonic
HDC-HS900
220GB HDD, 1920 x 1080p HD, 3.5in Touch Screen LCD, 20x Intelligent Zoom

Canon
VIXIA XA10
64GB Internal Flash Professional Camcorder, 2.37MP

Video Accessories

STEADICAM
Merlin Stabilizer
Stabilization System for Camcorders And HD DSLR Cameras
$798.99

Lupo light
101 Quadrilight 2000
4x55 Watt Fluorescent Light with Local Dimmer,
$975.99

SONY
LMD 9020
9" Professional LCD Multi Format Color Monitor
$998.99

AZDEN
310LX UHF
On-Camera Bodypack and Plug-in System
$538.99

bescor
LED-150 12V
On Camera Dimmable LED Video Light w/ Cigarette Plug (bundle)
$138.99

anton bauer
Dionic HCX
14.4V-120W Lithium-ion Battery
$618.99

I·D·X
Endura E-10
98Wh Li-Ion V-Mount Battery Pack, 14.8 Volts/6.6 Ah
$391.99

ZOOM
Q3HD Handy Video Recorder
2.4 inch Widescreen Color LCD Screen
$298.99

SAME DAY SHIPPING on orders placed till 7:00pm on Mon-Thur, Friday on orders placed till 1:00pm for all in-stock items. **FREE SHIPPING** on thousands of items! Plus, Adorama protects you more than ever with our **30-DAY MONEY BACK** guarantee! Shop with confidence and rest assured. For complete details, call 800.223.2500 or visit adorama.com

BBB ACCREDITED BUSINESS

ROKINON 24MM F/1.4 ED AS UMC

CONTINUED FROM PAGE 88

viewfinder image—ironically, the exact situation in which you would reach for an f/1.4. However, this probably had more to do with our camera's focusing screen than the lens itself.)

On the Popular Photography optical bench, the Rokinon turned in excellent sharpness and contrast numbers, with results almost identical to those of the Canon 24mm f/1.4 and slightly better than those of the comparable Nikon.

In DxO Analyzer Version 4.1 tests of distortion control, we found Visible-range barrel distortion (0.36%)—a strong performance by historic standards, but not strong enough to beat the Canon or Nikon, both of which landed in the Slight range. On the other hand, the Rokinon's maximum subject magnfication of 1:4.84 bested both. As for edge vignetting, the Rokinon's f/4 fell somewhere between the Nikon's f/5 and Canon's f/2.

While expensive by Rokinon standards, this lens is still much more affordable than other 24mm f/1.4 options. If $700 is your lens budget for the year, and you're comfortable with manual focus and manual stopdown, this Rokinon can transport you to the thrilling, rock-your-world thrills of f/1.4. *—Julia Silber*

SUBJECTIVE QUALITY FACTOR

Our standard lens test, SQF rates sharpness by print size

24 MM

Size	5x7	8x10	11x14	16x20	20x24
1.4	96.6	95.6	93.1	87.9	81.3
2.0	96.8	95.8	93.1	87.9	81.4
2.8	96.9	96.0	93.7	89.0	83.2
4.0	97.1	96.3	94.2	89.9	84.5
5.6	97.2	96.4	94.4	90.3	85.3
8.0	97.2	96.4	94.4	90.4	85.4
11.0	97.0	96.1	93.9	89.5	84.0
16.0	96.6	95.6	93.0	87.9	81.5
22.0	95.9	94.7	91.6	85.3	77.2

KEY A+ A B+ B C+ C D F

ADORAMA
MORE THAN A CAMERA STORE

adorama.com
42 West 18th St.
New York City, 10011
800.223.2500

Adorama's Un-Beatable Service
CLICK BY 6 IT SHIPS
SAME DAY SHIPPING
ON ORDERS PLACED BY 7PM MON-THU, FRIDAY BY 1PM EST
for details visit adorama.com

Film Scanners

plustek
OpticFilm 7600i SE
7200 dpi Film Scanner with Automatic Dust and Scratch Removal

PACIFICIMAGE
PrimeFilm 120
Multi-Format CCD Film Scanner with 3200dpi Optical Resolution, USB Connectivity

FLASHPOINT
Stand-alone Scanner
for Up-to 4in x 6in (A6)

$49.95

Flatbed Scanners

EPSON
Perfection V700
Photo Photo Flatbed 4800x9600 dpi, 48 bit, built-in 8"x10" Transparency Unit,

ScanJet 5590
Digital 8.5x11" with Duplexing Automatic Document Feeder, 2400 dpi, USB Interface,

Canon
CanoScan 9000F
9600 x 9600 Optical dpi, USB 2.0 Interface

Pro Printers

Up To $500 Rebate when purchasing a printer together with select DSLR cameras

EPSON
Stylus R2880
8 Color 13" Wide Inkjet Color Printer, 5760 x 1440 Optimized dpi with PictBridge

Canon
Pixma Pro 9500 Mark II
4800 x 2400 dpi Resolution for Mac & Windows

Designjet 111
24 inch Large-Format Color Inkjet Printer - Roll A1 (24 in), 1200 dpi x 600 dpi, Parallel, USB

Wide Format Printers

EPSON
Stylus Pro 4900
17" Standard Edition Inkjet Printer, 2880 x 1440 dpi, USB 2.0 and Ethernet Port Interface

Canon
imagePROGRAF iPF6100
8" - 24" Paper Width, with Ethernet and USB 2.0 Interface

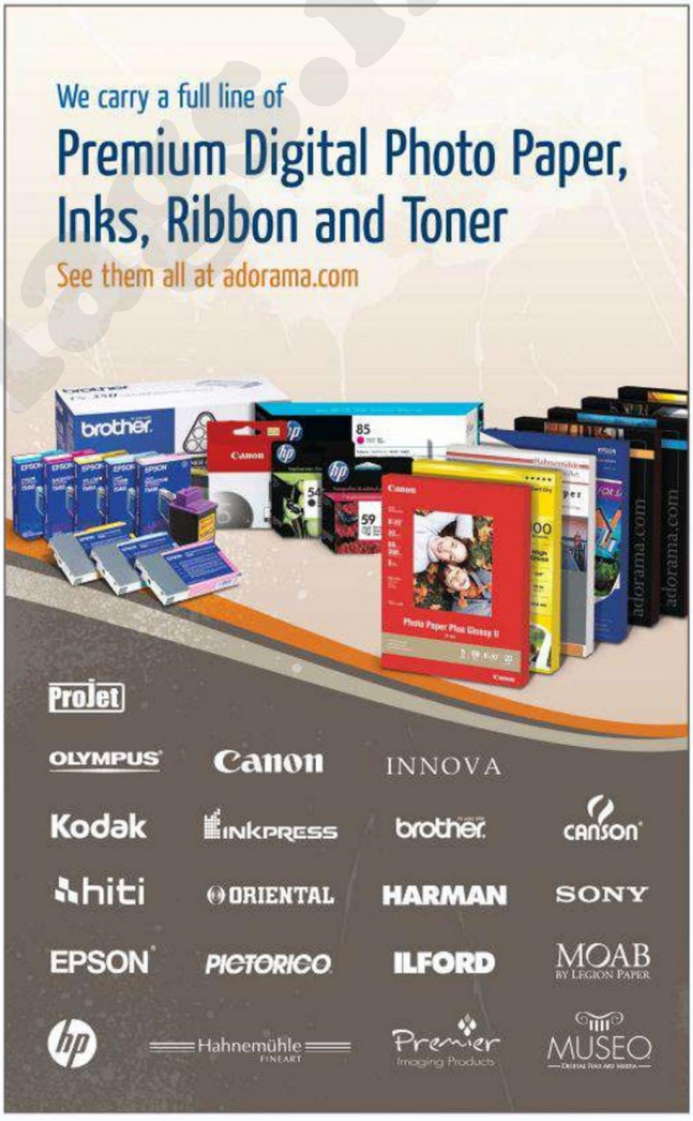
Z3200 Designjet
24" Compact Color Photo Printer with USB 2.0 Interfaces for Mac & Windows

MP3 Players

Value Added Reseller
iPod Nano
8GB, 6th gen 1.54 inch Multi-Touch LCD Display (In-store only)

SanDisk
Sansa Fuze
MP3 Player, FM Tuner, 2.4" Color 320 x 240 QVGA Screen, Card slot

COBY
MP757-16G
MP3 Video Player with 2.4 inch Display, 16GB Memory, FM and Touch



ADORAMA tv
Watch. Learn. Create.
4 shows, new episodes daily (M-Th):
adoramatv.com

Adorama Pix
The source for the finest quality digital prints, photobooks and more:
adoramapix.com

Used & Trade
Paying top dollar for your used equipment, get an instant online quote at:
adorama.com/sell

Learning Center
Video tutorials, how-to's, interviews and reviews for photographers of all levels:
adorama.com/ALC

WorldMags.net

ADORAMA
MORE THAN A CAMERA STORE

adorama.com
42 West 18th St.
New York City, 10011
800.223.2500

Adorama's Un-Beatable Service
CLICK BY 6 IT SHIPS
SAME DAY SHIPPING
ON ORDERS PLACED BY 7PM MON-THU, FRIDAY BY 1PM EST
for details visit adorama.com

FLASHPOINT
PZ SOFTBOXES
SOFT LIGHT WITHOUT THE STRUGGLE

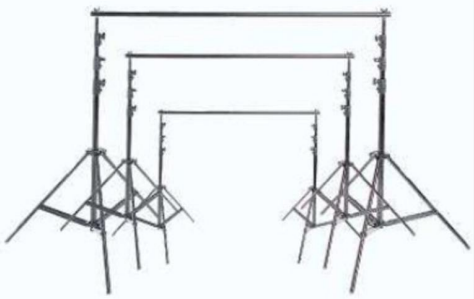
There's a simple reason our FLASHPOINT PZ Softboxes and Octaboxes are better than any others you can buy: a *zipper*. When you slip their support rods into the aptly-named speed ring, you needn't wrench your wrists bending them to pop the softbox into shape. That's because one side of the Flashpoint softbox has a zipper running down the middle—and all you have to do is zip it up to flex the rods.

- Patented zipper design allows faster, hassle-free setup
- Recessed front panel attached with Velcro for easy removal; inner diffusion panel held in place with tethered clips for quick attachment
- Accessory PZ Speed Rings allow use with most strobe brands
- Available in eight standard sizes plus two Octaboxes

You might think you'd pay extra for that ingenious design. You'd be wrong. Made of rugged, pro-quality materials, our PZ line sells for between one-third and one-half the price of comparably-sized, name-brand softboxes. Let there be light—soft, flattering light!

FLASHPOINT Easy-Shoot Solutions

Background Support System



The background stand comes with interlocking 4 section crossbar. and a handy carrying bag with compartments.

The top of the stand meets the crossbar there is a screw and wing nut to keep the crossbars secured to the stands.

Portable Stand	10' Stand	13' Stand
FPBS13B	FPBS10	FPBS13
$64.95	$99.95	$149.95

"Q" Series Light Modifier Kit

For shoe-mount strobes, great for on-location photography or work in a small studio. Includes a Beauty Dish Reflector, Snoot, Diffuser Dome, and accessory pack. Each also available for purchase seperately,

$129.95

Speedlight To Bowens Adapter

Allows you to use your flash with Bowens light modifiers, Beauty dish & softboxes, Sold Separately

$24.95

16" x 16" Deshadow Box

Portable still life studio-in-a-bag with 16" x 16" soft light box, halogen lamps, blue background sweep, a custom carrier and camera stand. An easy on-the-go lighting solution

$29.95

5-in-1 Collapsible Disc Reflector

Translucent, white, black silver and gold surfaces. Perfect for reducing contrast, warming skin tones, eliminating shadows or just softening light. Can be held by hand or light stand. Available in three sizes

STARTING AT
$16.95

SAME DAY SHIPPING on orders placed till 7:00pm on Mon-Thur, Friday on orders placed till 1:00pm for all in-stock items. **FREE SHIPPING** on thousands of items! Plus, Adorama protects you more than ever with our **30-DAY MONEY BACK** guarantee! Shop with confidence and rest assured. For complete details, call 800.223.2500 or visit adorama.com

Store Hours
Sunday 9:30am - 5:00pm
Mon-Th 9:00am - 8:00pm
Friday 9:00am - 2:00pm
Saturday Closed

BBB ACCREDITED BUSINESS

WorldMags.net

Right, a Flashpoint II 620M Monolight with DC battery pack; left, the unit's control panel

LIGHT BRIGADE

Adorama's Flashpoint lighting line now offers a source for every photographic purpose

PDN GEAR OF THE YEAR

Adorama recently won the *Photo District News* 2011 "Lighting Gear of the Year" award for its Flashpoint II 620M Portrait Wedding Monolight Kit.

Flashpoint II 320M Monolight

Flashpoint Bright Beam 1000

Flashpoint Cool Light 4

Flashpoint 312 LED Light

Hot, cold, flash, fluorescent, and now LED—photographic light sources are as varied as they are confusing. If you're in the market but not sure what to get, Adorama offers an unexpected resource. You'll find primers on studio and location lighting at Adorama.com/learn, and Adorama's own Flashpoint line features every kind of light source in the business at prices far lower than competing brands.

STROBE Flashpoint II Monolights Adorama's house-brand strobes feature all-in-one design—flash head, power source, and controls are incorporated into a single, metal-sheathed unit. You can plug them into a wall socket for studio work or run them off the Flashpoint DC battery pack in locations without electricity. The **Flashpoint II 320M Monolight** costs just $99.95.

Adorama offers a complete range of **light-modifying attachments** for all its Flashpoint units. These include umbrellas, beauty dishes, and **Flashpoint PZ softboxes**, which come in square, rectangular, and octagonal shapes and set up in seconds thanks to an **exclusive zippered design**.

TUNGSTEN Flashpoint Bright Beam The adjustable **Flashpoint Bright Beam 1000 Tungsten Quartz Hot Light** ($99.85) can be used by itself in the studio, modified with Flashpoint umbrellas, softboxes, and other attachments. Or it can serve as a color-matched complement to existing interior light.

FLUORESCENT Flashpoint Cool Lights Adorama's daylight balanced fluorescent sources are flicker-free, generate virtually no heat, and yield four times more light per watt than tungsten. The **Flashpoint Cool Light 4** ($73.95) houses four 55-watt lamps that produce the equivalent of nearly 900 watts of tungsten, plenty for creative control of depth of field and shutter speed.

LED Flashpoint LED Using the most efficient technology of all, the **Flashpoint 312 LED Light** ($139.95) runs for hours on two batteries, yet is the equivalent of carrying around a 100-watt bulb. It's dimmable—and twin tungsten/daylight LED arrays mean you can dial in any color temperature to match the ambient light!

Scan and you can win $100!

Flashpoint lighting products are available exclusively from Adorama. Orders can be placed online at *Adorama.com*, by calling (800) 223-2500, or by visiting the Adorama superstore at 42 West 18th Street in New York City's Chelsea district.

ADORAMA
MORE THAN A CAMERA STORE

WorldMags.net

 CONTINUED FROM PAGE 68

6 Get steadier long exposures with combined mirror lockup and self-timer.

Even on a tripod, your DSLR can shake due to mirror slap—the vibration caused when the mirror flips up and down—so you should lock the mirror up for long exposures. It can also shake if you trip the shutter with your hand on the camera, so you should fire with a remote or the self-timer. But did you know you could stop both shakes with one control? Mirror lockup with a 2-second delayed release is found on most DSLRs in a self-timer menu or drive-mode selection.

TIP **You can use the lockup/delayed release without a tripod. Rest the camera on a steady surface, or prop your elbows on a steady surface with the camera held firmly against your face. Take a breath, trip the shutter, and hold still until the mirror drops back down.**

7 Try another kind of flash memory: TTL flash-exposure lock.

Just as cameras have an exposure lock setting that lets you set exposure for one area of the scene and then recompose, many DSLRs have flash-exposure lock. You should use it similarly: When a person or other important subject will be positioned at the edge of the frame, use the lock to preset flash exposure for the subject (it uses a preflash), then recompose.

TIP **Flash exposure lock works with accessory TTL flash units—on- or off-camera—as well as the built-in unit.**

8 Take a time-lapse sequence using the interval timer.

Curiously, you used to see on-board interval timers more often in compact cameras than in DSLRs, which usually required a separate controller to make the camera shoot automatically at regular intervals. But times are changing, and more and more DSLRs include built-in intervalometers. Creating time-lapse videos from still shots is popular these days, and some cameras will even bundle shots into a video clip for you—no video editing software needed.

TIP **Make sure your camera's battery is fully charged before making a long sequence, or consider using an AC adaptor.**

What is a microphone doing on the *back* of the Canon EOS-1Ds Mark III, below? It allows the the shooter to add an audio clip to be attached to an individual frame.

9 Go wild and crazy (or, better yet, subtle and sophisticated) with filter effects.

We all know these imaging effects are in there, and yes, we have called some of them cheesy and over-the-top (witness the Pentax K-5's cross-processing effect). But you know what? They're fun, and can be useful, too. Filters such as fisheye effect and miniature effect can add zing to city scenes when you don't have the right lens to do it for you; soft focus can help challenged complexions; pastel or watercolor effects can tone down harsh midday light. And remem-

DAN BRACAGLIA

10 Take notes without a notebook, by using voice memos.

This feature allows you to record a voice clip and embed it in the image file. It eliminates the need for a notepad or handheld device for recording the stuff that doesn't get into the EXIF data: Names of people and places, how you got to the location, hair-raising happenings, etc. (While this capability is now limited to mostly higher-end DSLRs, we suspect it will eventually migrate downwards, as most DSLRs now have built-in mics for video recording.)

TIP **Use the voice clip to record info for future reference: "Come back when mist is predicted" or "Get here early for the eastern light on the mountain."**

WorldMags.net

ber, if you shoot RAW + JPEG, you're not stuck with the rendition—it's applied only to the JPEG.

TIP **Preview what a monochrome rendition will look like by setting JPEG capture to b&w, then use filters such as red, green, or yellow to alter tonality.**

11 Customize images with JPEG profiles.

Every camera maker has a different term for them, such as Picture Styles (Canon) or Picture Controls (Nikon), with setting names such as Neutral or Vivid. But we call them JPEG profiles: the specific settings (saturation, sharpness, contrast, etc.) that the camera applies to a JPEG. You can tweak each parameter individually and save them as custom profiles. A few cameras even let you save a profile to a memory card, then transfer it to another camera.

TIP **Shoot only in RAW? The manufacturer's conversion software bundled with the camera will usually allow you to apply a profile during processing on the computer.**

12 Dig out shadow detail with dynamic-range extenders.

Again, camera makers have different names for them (Nikon: D-Lighting; Sony: D-Range optimizer) but the idea is the same: gain up the shadows without boosting the highlights. (This is separate from the HDR function found on some cameras.) As with many other picture adjustments, these shadow-highlight optimizers can also be applied later with the manufacturer's RAW software.

TIP **Don't overdo it. We've found that some dynamic-range boosters, if applied excessively, can also increase noise in the shadows.**

ADORAMA
MORE THAN A CAMERA STORE
Adorama's Un-Beatable Service
CLICK BY 6 IT SHIPS
SAME DAY SHIPPING
ON ORDERS PLACED BY 7PM
MON-THU, FRIDAY BY 1PM EST
for details visit adorama.com

Even light with your pop-up flash

Direct Pop-up Flash
Pop-up Flash + Lightscoop
Photos by Lightscoop User John Burgess

Bounce the pop-up flash with Professor Kobré's Lightscoop® to produce natural lighting with these DSLR cameras:
Canon 10D, 20D, 30D, 40D, 50D, 60D, 70D **Canon** Rebel XTi, T2i, 400/450, 500/550, XT, XS, Xsi, 350, 1000D **Nikon** D40, D40x, D50, D60, D70, D70s, D80, D90, D100, D200, D300, D700, D3000, D3100, D5000; **Olympus** E3, E420, , 620, E520; **Pentax** K-7, K-X, K10D, K20D, K100D, K200D; **Sigma** SD14 series; **Fuji** FinePix Pro S series; **Sony** a200, a250, a300, a330, a380, a500, a550, a700

Just $29.99
Professor Kobré's lightscoop
David Pogue, New York Times "Incredible!"
Standard Lightscoop shown. Warming version also available. Learn more at Lightscoop.com
US Pat. D605,217 S & Other Patents Pending.

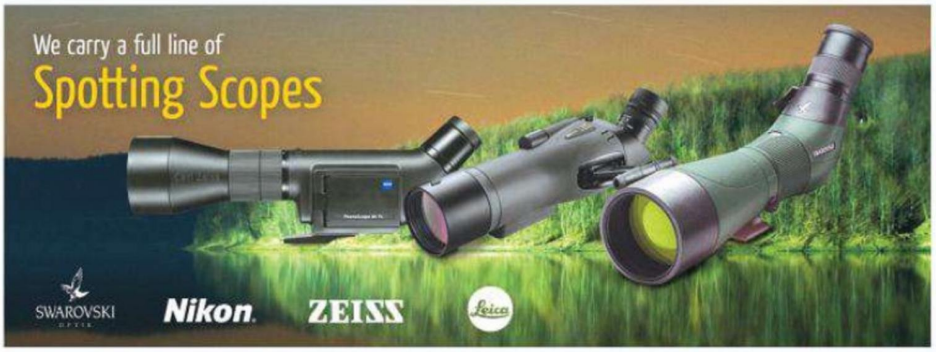
Binoculars

SWAROVSKI OPTIK
EL Series
10x42 EL, waterproof prism binocular w/6.3° angle of view, in green

ZEISS
FL Victory
10x42 T* waterproof Abbe-Koenig roof prism binocular w/6.3° angle of view, USA

Nikon
Monarch
8x42 waterproof & rubber armoured roof prism binocular, USA

VANGUARD
8.5 x 45 Endeaver ED Series
Waterproof & Fog Proof BaK4 Roof Prism Binocular



Adorama Pix
The source for the finest quality digital prints, photobooks and more:
adoramapix.com

Used & Trade
Paying top dollar for your used equipment, get an instant online quote at:
adorama.com/sell

Learning Center
Video tutorials, how-to's, interviews and reviews for photographers of all levels:
adorama.com/ALC

WorldMags.net

ADORAMA
MORE THAN A CAMERA STORE
adorama.com 800.223.2500

Archive Slide Pages

Archival Pages

Exclusive thin backing coupled with high clarity provides excellent resolution when proofing without removing negatives from the preserver. Hanging File System designed specifically for hanging photographic records in standard file drawers or file boxes

Print File
STARTING AT
$6.95

Archive Storage

Storage Boxes

We Carry A Large Selection Of: Archival Storage Boxes, Posters/ Print Protection, Shipping Tubes

FLASHPOINT

Get The Lowest Prices At Adorama.Com

STARTING AT
$6.95

FLASHPOINT
Pro Albums
NEW

- Self Adhesive Album
  Peel n' Stick With Padded Front Cover
- Bella Series – Book bound w/metal edges
- Barn door style CD Holder f/ 1 or 2 CD's

Store Hours
Sunday 9:30am - 5:00pm
Mon-Th 9:00am - 8:00pm
Friday 9:00am - 2:00pm
Saturday Closed

BBB ACCREDITED BUSINESS

TECH TRENDS

CONTINUED FROM PAGE 64

wrong at some step is pretty high. When you mate those two wafers together, if you get a single particle of dust trapped between them, you lose at least one sensor."

The payoff? Larger pixels in the same amount of space—for both higher resolution and less noise. As manufacturing capabilities advance further, we expect to see larger and larger BSI sensors.

Pixel counts will keep rising, too. Tetsuya Yamamoto, operating officer and general manager of development headquarters of Nikon's imaging company, says, "We still have to improve the technology, so we still think it is helpful to raise the pixel count. We also have to develop for dynamic range, but as we learn how to make pixels smaller, we also learn how to deal with other issues to consistently deliver excellent image quality. There must be a balance between resolution and noise, but we will still see higher pixel counts."

Wireless Connectivity

Even before Kodak released the EasyShare One in 2005, moving photos wirelessly was a big goal. Since then, manufacturers have struggled in vain to get cameras connected to Internet hotspots.

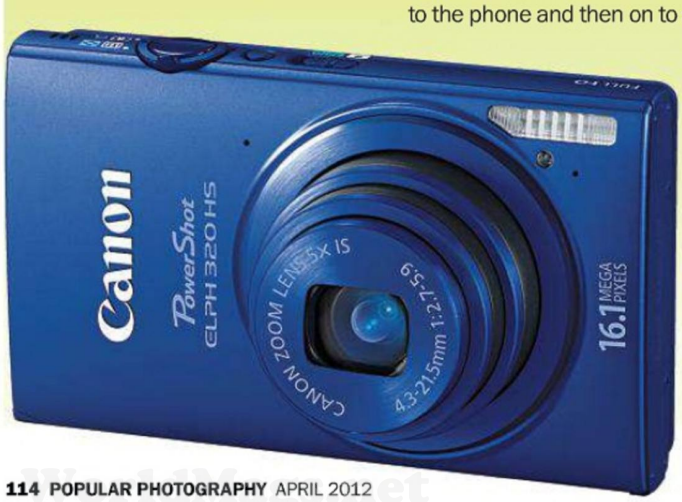
So what's next? Connecting wirelessly to cell phones. This way you can capture a picture that puts a cell phone image to shame, and then seamlessly send it to the phone for upload to the Internet. And the possibilities for communication between the camera and cell phone or digital tablet are vast.

"We've built an app paradigm," says Samsung's Jay Kelbley. "With our remote viewfinder app, your smart device can be used to remotely control your camera while using the smart device as the finder to frame your images. Our mobile-link app lets you browse content on your camera, bring those images into your smart device, and upload them to Facebook or back them up on a cloud-based service like Samsung's AllShare."

Says Sony's Mark Weir, "Leveraging the upload capability of the cell phone is what makes it all work. We all hope that the bridge will free cameras to be cameras,

From Camera to Phone

"Wireless is really becoming more of a factor this year in the point-and-shoots," says Canon's Chuck Westfall. "The key is making it easy and friendly for people to share their images." Camera manufacturers have realized that smart phones can be their gateway. Using peer-to-peer Wi-Fi connections between the camera and a smart device, such as an iPhone or Android phone, you can move images from the camera to the phone and then on to social media sites or elsewhere. Apps, such as Canon's CameraWindow for iPhone, make the process easier.



and phones to be phones. So far, neither have been both at the same time very well."

Sony cameras use smart devices to send images and video to its PlayMemories service, as well as to social sites such as Facebook, Flickr, and YouTube.

Panasonic has a proprietary service, too. "We've created a free Android and iPhone app called Lumix Link," says Darin Pepple. "It makes the connection easy, can send images to your phone or tablet, and can also send it to Lumix Club, where you can set up social network defaults so that, after you upload to your phone, Lumix Club takes over and you don't have to update each social network individually."

Our lives continue to become ever more Web-connected. And in that process cameras will find their rightful place in the ecosystem of electronics that we use to help define our existence. They can become a sort of universal language. As more and more people use images to communicate on an everyday level, who knows how our world will change?

ADORAMA
MORE THAN A CAMERA STORE
Adorama's Un-Beatable Service
CLICK BY 6 IT SHIPS
SAME DAY SHIPPING
ON ORDERS PLACED BY 7PM
MON-THU, FRIDAY BY 1PM EST
for details visit adorama.com

FREE EDUCATION
FOR PHOTOGRAPHERS
VIDEO TUTORIALS
HOW-TO ARTICLES
PRODUCT REVIEWS
WORKSHOPS @ADORAMA
BUYING GUIDES
how did they do that?
digital photography 1 on 1
product reviews
behind the scenes
new weekly episodes
FEATURING HOST MARK WALLACE
FIND US ON:
YouTube
iTunes
WATCH. LEARN. CREATE.
VISIT US AT ADORAMATV.COM, ADORAMA.COM/ALC
OR THE iTUNES STORE.
ADORAMA tv
adoramatv.com | adorama.com/alc | adorama learning center
SNAP IT. SAVE IT.
SHARE IT. SHOW IT.
VISIT OUR STORE
42 W 18 ST [5+6 AV] NYC
800-223-2500
ADORAMA.COM

SAME DAY SHIPPING on orders placed till 7:00pm on Mon-Thur, Friday on orders placed till 1:00pm for all in-stock items. FREE SHIPPING on thousands of items! Plus, Adorama protects you more than ever with our 30-DAY MONEY BACK guarantee! Shop with confidence and rest assured. For complete details, call 800.223.2500 or visit adorama.com
BBB ACCREDITED BUSINESS

TRAER SCOTT

Unnatural Art

Traer Scott captures a disquieting reflection

WHEN I WAS a little girl, my mother was an assistant curator at the Natural History Museum in Raleigh, NC. When she brought me with her to work, I would spend hours in its diorama room. These exhibits are both fascinating and macabre; I think of them now as a relic of our troubled coexistence with nature.

Visiting the Natural History Museum in New York, I accidentally captured my husband in a picture of a diorama. I liked the idea—the animals have been there for decades, but nothing is more fleeting than a reflection. I began returning and waiting by exhibits with a bounce flash, capturing people as they passed.

Traer Scott (traerscott.com) used a Nikon D700 and 24mm f/2.8 lens, with a hot-shoe flash.

I love this photo because the girls are particularly fashionable, and there's such a successful melding of the bodies. The one girl seems almost alarmed or uneasy, which is very fitting for a gazelle.

—As told to Lori Fredrickson

WorldMags.net

it's more than a photo.

it's proof.

© Tyler Stableford. SanDisk Extreme® Team photographer.
Langjokull Glacier, near Reykjavik, Iceland

Capture
Share
Preserve

EXTREME DURABILITY.

TEMPERATURE PROOF, WATERPROOF MEMORY CARDS.**

When it comes to preserving those once-in-a-lifetime moments, you need a memory card you can trust. Resistant to water damage and able to withstand operating temperatures as low as -25˚C;** **SanDisk® SD™ Cards** are built to capture and store your photos, videos and other memories reliably. SanDisk, dedicated to flash memory, trusted by professionals worldwide.

SanDisk®
STORE YOUR WORLD IN OURS®

Scan the QR code to learn more about SanDisk products

**SD™, SDHC™ and SDXC™ card formats up to 64 GB only. See sandisk.com/proof for additional information and limitations. SanDisk, the SanDisk logo, SanDisk Extreme and Store Your World in Ours are trademarks of SanDisk Corporation, registered in the U.S. and other countries. The SD, SDHC and SDXC marks and logos are trademarks of SD-3C, LLC. © 2012 SanDisk Corporation. All rights reserved.

SIGMA

Santa Barbara, California, USA | CAMERA : SIGMA SD14 : ISO100, F11, 1/160sec | LENS: SIGMA 8-16mm F4.5-5.6 DC HSM 8mm(8-16)

SIGMA LENS for DIGITAL
NEW RELEASE

8-16mm F4.5-5.6 DC HSM

Lens Case supplied

The world's first ultra wide zoom lens covers focal lengths from 8mm, designed specifically for digital cameras.

The world's first ultra wide zoom lens with a minimum focal length of 8mm, designed specifically for digital cameras with an APS-C size image sensor. Four FLD glass elements and three aspherical lenses provide high quality images. Only an ultra wide angle has a wide angle of view and exaggerated perspective to produce striking images.

SIGMA CORPORATION OF AMERICA 15 Fleetwood Court, Ronkonkoma, NY 11779, U.S.A. | Tel: (631) 585-1144 | Fax: (631) 585-1895 | www.sigmaphoto.com
Follow us on Twitter.com/Sigma_Photo and Facebook.com/sigmacorporationofamerica
USA 3 Year Service Protection